

STATE OF CONNECTICUT – HEALTH INFORMATION TECHNOLOGY EXCHANGE

**REQUEST FOR PROPOSALS**

**RFP# HITE-CT2001**

**HITE-CT System Services**

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**Date Issued: April 14, 2011**

**Date Due: May 13, 2011 @ 2:00 p.m. Eastern Time**

**Send all sealed responses to:**  
**State of Connecticut**  
**Department of Information Technology**  
**Contracts & Purchasing Division**  
**Attn: Jacqueline Shirley**  
**101 East River Drive**  
**East Hartford, CT 06108**

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## **1 Forward**

### **1.1 Preface**

State of Connecticut – Health Information Technology Exchange, hereinafter referred to as “HITE-CT”, will be the contracting entity for this service. The DOIT Contracts and Purchasing Division will support the solicitation process for this procurement.

### **1.2 Objective**

The State of Connecticut’s Department of Information Technology (DOIT), IT Contracts & Purchasing Division (CPD), is issuing this Request for Proposals (RFP) on behalf of HITE-CT, for the HITE-CT Health Information Exchange System Services to meet the following objectives;

The purpose of this Request for Proposal ("RFP") is to solicit a proposal from vendors to provide a hosted Cross-Enterprise Document Sharing (XDS) Affinity Domain Infrastructure to HITE-CT, along with a healthcare provider service directory, and identity management to support NHIN Direct communications in addition to the document sharing. These services shall facilitate state Health Information Exchange (HIE) efforts including those meeting HIE meaningful use requirements. All of this work will be done as a business associate in accordance with the HIPAA Privacy and Security Regulations, as modified by the HITECH Act (45 CFR Parts 160, 162, and 164), and with all applicable Connecticut State security and privacy regulations. HITE-CT intends to establish an agreement with a vendor or vendors who demonstrate the ability to meet the standards and specifications for interoperability, quality of service, and cost-effectiveness. A contract shall be executed that embodies the terms and conditions agreed upon by both parties. At a minimum, the contract shall contain the terms and conditions stated in this RFP, including a Business Associates Agreement (BAA), and System Requirements. The vendor should attach any and all applicable standard form contracts that they utilize for the provision of similar services in their response to the RFP. The contracting party for all contracts will be HITE-CT. This RFP will supersede any conflicting terms and conditions received.

### **1.3 Background**

#### **1.3.1 Overview of HITE-CT**

HITE-CT is established pursuant to subsection (a) of section 19a-750 of the Connecticut General Statutes to carry out the purposes of the authority, as described in subsection (b) of this section. The purposes of the authority include, but are not limited to, “promoting, planning and designing, developing, assisting, acquiring, constructing, maintaining and equipping, reconstructing and improving of health care information technology.” The HIE will connect physicians and other healthcare professionals in Connecticut. While initial HITE-CT efforts will be focused on supporting Meaningful Use Stage 1, the longer-term goals of the HIE initiative are to support a broad spectrum of clinical and population health services.

The (HITE-CT) is a regional health information exchange established pursuant to section 19a-750 of the Connecticut General Statutes. It is managed by a board of directors as the governing body. The HITE-CT region's public health and health care providers number over 20,000. **The State licenses and regulates 16,690 physicians**, 32 acute care and children's hospitals, 14 community health centers with over 50 satellite sites, 77 local health departments (52 are full-time, and 25 are part-time), 241 nursing homes, 251 outpatient clinics, 424 behavioral health facilities; and 29 urgent care centers. Beyond physicians, the DPH licenses over 60 different practitioner titles. In addition to these direct care providers, Connecticut has hundreds of emergency medical services managed by municipal, public, and private entities. A number of entities have expressed interest in participating in the early deployment and short-term deployment phases of the initiative. Any healthcare provider meeting participation requirements will be provided the opportunity to participate.

Members of the HITE-CT seek to share clinical documents in an XDS Affinity Domain and to be able to use the NHIN Direct specifications for exchanging clinical documents for those Connecticut providers that are unable to connect to the exchange.

### 1.3.2 Project Objectives and Project Expansion Plans

Through the Connecticut Department of Public Health, HITE-CT is participating in the Office of the National Coordinator for Health Information Technology (ONC) State Health Information (State HIE) Exchange Cooperative Agreement Program, and in conjunction therewith is looking to establish a hosted information exchange service to support HITE-CT area providers, for Meaningful Use Stage 1 exchanges within the state with initial goals including:

- Receipt of structured lab results
- Sharing patient care summaries (CCD/C32 as constrained for Meaningful Use) across unaffiliated organizations
- Support the exchange of immunization data between the State Immunization Registry and Meaningful Use Certified EMRs

These goals may evolve to include support for additional Meaningful Use stage I goals, and additional Meaningful Use and stakeholder requirements, including, but not limited to:

- providing patients with an electronic copy of their health information
- Reporting clinical quality measures to CMS or states
- Supporting Medication reconciliation between care settings
- Submitting of electronic syndromic surveillance data to public health agencies
- recording advanced directives for patients 65 years or older
- submitting of electronic data on reportable laboratory results to public health agencies
- Sending reminders to patients (per patient preference) for preventative and follow-up care
- Providing patients with timely electronic access to their health information (including laboratory results, problem list, medication list, medication allergies)
- Providing visit summaries

In order to support this project and future growth, HITE-CT plans to establish an XDS Document Sharing Infrastructure for the Health Information Exchange within Connecticut, along with NHIN Direct support for those providers unable to connect to the exchange or otherwise seeking a point-to-point exchange.

This state-wide information exchange will connect to XDS-based document sharing capabilities already in place in multiple communities using the Cross-Community Access (XCA) as appropriate. HITE-CT intends to establish this infrastructure through a hosted service-based environment. We expect this to be a phased implementation initially including one or more hospitals, provider organizations, group practices, small provider systems, integrated delivery system, and community health system. Scope of the pilot will include a mix of large and small practices, hospitals, and local HIEs that will exemplify the types of entities in the state. The HIE is expected to grow over a number of years.

The XDS Affinity Domain Infrastructure Implementation will establish a hosted XDS Registry, Repository, Patient ID Cross-Referencing (PIX) Manager/Patient Demographic Supplier (PDS), Healthcare Provider Directory (HPD) supporting digital identities, and edge system interfaces to existing HITE-CT provider systems for publication and retrieval of medical summaries, immunizations, and laboratory results, with the capability to expand to other clinical content in support of near-term and long-term HITE-CT development.

## **1.4 Evaluation**

An evaluation team will review all vendor responses to this RFP.

Any award to be made will be based on the best overall proposal with appropriate consideration given to all requirements and established existing client satisfaction. Evaluation will be based upon the total program and the total price quoted for all items.

The following elements may be considerations in evaluating the proposals:

- Total Cost
  - Analysis of the rates and fees, pricing and discounts
- Experience in providing Healthcare Information services and software
  - Evidence of current services and existing client satisfaction
  - Skills and industry certifications of provider personnel
  - The ability to successfully manage the project timeline
- Experience in providing Healthcare Data Center services
  - Evidence of current services and existing client satisfaction
  - Skills and industry certifications of provider personnel
  - The ability to successfully manage the project timeline
- Ability to support privacy protections conformant to the policies established by the HITE-CT
- Ability to service security and interoperability requirements including BPPC conformant to the policies established by the HITE-CT. This includes not only capture of patient consents (whether opt-in or opt-out), but also the ability to mark the documents using the BPPC profile as restricted (e.g. HIV, Substance Abuse, Mental Health), routine, or other policy-based criteria as defined by HITE-CT.
- Overall Requirements
  - Responsiveness to this RFP including all questions and requests for information associated with the RFP
- Geographic Requirements

## State of Connecticut – Health Information Technology Exchange

### Request for Proposals

#### HITE-CT System Services

- Location – Hosting site and service operations must be physically located and managed from within the US
  - Site Risk Assessment
- Facility Requirements: HITE-CT may verify these criteria by site visit or certifications (e.g. ENHAC, [SSAE 16](#)) that may be presented that validate assurances for the following
  - Construction and site layout
  - Mechanical and Electrical System Redundancy
  - Fire Detection and Suppression
  - Security
  - Access to facilities for personnel and equipment
  - Available space and growth plans
  - Telco Access
  - No Single Point of Failure
- Operational Procedures
  - Adherence to industry best practices (e.g. ITIL)
  - Service Level Agreements
  - Ease of operational interaction
- Previous Experience
  - Ease of doing business
  - Flexibility of Terms & Conditions
  - Change control process
- Depending upon options, cost, and assessment of resource information loss, this procurement may include historical record conversion.
- This procurement may include historical record conversion. This must include the ability to export and extract the documents from a single provider should that provider migrate to a locally managed Document Repository.
- Financial stability and company financial performance
- Ability to implement and grow HITE-CT services and information exchange content
- Ability to conform to standards and system requirements (see Attachment 3)

The HITE-CT reserves the right to reject any and all bids, to waive any and all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder, and the right to disregard all nonconforming, non-responsible, unbalanced, or conditional bids. The HITE-CT reserves the right to reject the Bid of any Bidder, if the HITE-CT believes that it would not be in the best interest of the project to make an award to that Bidder whether because the Bid is not responsible or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the HITE-CT. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

In evaluating Bids, the HITE-CT will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternative unit prices and other data, as may be requested prior to the Notice of Award.



The HITE-CT may consider the qualifications and experience of subcontractors, vendors, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, vendors, and other persons and organizations must be submitted.

The HITE-CT also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted before the Notice of Award.

The HITE-CT may conduct such investigations as the HITE-CT deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed subcontractors, vendors, and other persons and organizations to perform and furnish the Work in accordance with the RFP to HITE-CT's satisfaction.

If the contract is to be awarded, it will be awarded to the Bidder whose evaluation by the HITE-CT indicates to the HITE-CT that the award will be in the best interest of the Project.

Based upon these evaluations and additional discussions, the HITE-CT RFP evaluation team will prepare a short list of preferred vendors within sixty-three (63) days after the day of the Bid opening for further discussions regarding proposals in response to this RFP. HITE-CT may enter into discussions with more than one of the preferred vendors.

If the contract is to be awarded, HITE-CT will give the successful Bidder a Notice of Award within eighty-four (84) days after the day of the Bid opening and begin negotiation of a contract between the HITE-CT and the successful bidder. Successful bidder shall enter into a contract in a form acceptable to HITE-CT, and will be required to comply with any and all state contracting laws that apply to quasi-public agencies. If, after a reasonable period of time as determined by HITE-CT, the bidder that receives the notice of award and HITE-CT are unable to negotiate a contract acceptable to HITE-CT, HITE-CT reserves the right to select another bidder. HITE-CT reserves the right and discretion to fund one or more components or define parts of a vendor's proposal. In the event of such a determination, the vendor will be required to submit a revised budget reflecting the funding decision and such other information as the HITE-CT may require.

HITE-CT does not represent that these are the sole evaluation criteria and reserves the right to adjust the criteria at its discretion. HITE-CT will select the vendor who submits the most advantageous proposal. Vendor flexibility and creativity using sound business and technical judgment in meeting the HITE-CT technical, commercial, and contractual requirements will be an important factor in selecting the vendor for this opportunity.

## **2 Administrative Requirements**

### **2.1 Vendor Instructions**

#### **2.1.1 Conformity to Instructions**

Vendors must conform with all RFP instructions and conditions when responding to this RFP. HITE-CT at its discretion may reject any nonconforming proposal.

### **2.1.2 Proposal Responses to this RFP**

Vendors desiring to participate in this RFP process must submit proposals with the format and content as detailed in *Section 7: General Formatting Instructions* of this document. Vendors must respond to all requirements set forth in this RFP.

The overall business and technical requirements for this RFP, *Attachment 6*, are categorized as *functional requirements, non-functional requirements, and technical requirements*.

- ◆ In support of these requirements, the bidder is directed to respond to the set of questions provided in section 7.8 Architecture Overview to be provide in section I.C.1 of the vendor Business and Technical Proposal

### **2.1.3 Identifying RFP Communications**

#### **2.1.4 Vendor Questions and HITE-CT Replies**

The DOIT Contracts and Purchasing Division will reply to any written vendor questions which it receives in accordance with Section 3.1 and no later than the Vendor Questions Due date specified in Section 3.1.1 on behalf of HITE-CT.

Copies of this RFP will be made available only on the Internet, from the DOIT web page ([www.ct.gov/doit](http://www.ct.gov/doit)). Access the RFP by selecting the IT Contracts & Purchasing tab and then click on Bid/Proposal Notices. The State, on behalf of HITE-CT may, in its sole discretion, orally communicate responses to vendors if it is likely that written responses will not reach them prior to the proposal due date. However, oral communications notwithstanding, the State shall be bound only by the written document which follows.

#### **2.1.5 Acceptance of Administrative Requirements**

Vendor proposals must include unequivocal statements accepting the administrative requirements of this RFP, and must reflect compliance with such requirements. Any failure to do so may result in HITE-CT rejection of the proposal. These statements must be included in the Transmittal Letter.

#### **2.1.6 Deviating from RFP Specification**

HITE-CT will reject any proposal that deviates significantly from the specifications of this RFP. Vendors submitting proposals with any minor deviations must identify and fully justify such deviations for HITE-CT consideration.

#### **2.1.7 Exclusion of Taxes from Prices**

The HITE-CT is exempt from the payment of excise and sales taxes imposed by the federal government and/or the State of Connecticut. Accordingly RFP responses should not include any excise or sales tax on goods or services rendered. Vendors remain liable, however, for any other applicable taxes.

### **2.1.8 Vendor Contacts**

The proposal must provide the name, title, address, telephone number and email address of the contact person(s) respectively responsible for clarifying proposal content and for approving any agreement with HITE-CT. This information must be included in the Transmittal Letter.

### **2.1.9 Validation of Proposal Offerings**

The proposal shall be a binding commitment which HITE-CT may include, at its sole discretion, by reference or otherwise, into any agreement with the vendor. Therefore, each proposal copy must be validated by signature of a person having such authority to commit the vendor.

The signer's authority in this regard must be authenticated by a signed statement to that effect by an appropriate higher-level company official. A Vendor Proposal Validation and Authentication Statement, attached to this RFP as *Attachment 2*, must be used for this purpose.

### **2.1.10 Restrictions on Contact with HITE-CT Members**

From the date of release of this RFP until the right to negotiate a contract is awarded as a result of this RFP, all contacts with HITE-CT board members, and any member of any committee, sub-committee, evaluation committee of the HITE-CT, or State of Connecticut employees supporting the HITE-CT or any of the aforementioned committees (collectively the “members”) regarding this RFP shall be restricted. During the same period, no prospective vendor shall approach any of the members regarding this RFP. An exception to this restriction will be made for vendors who, in the normal course of work may need to discuss legitimate business matters concerning their work that is unrelated to this RFP.

Violation of these conditions may be considered sufficient cause by HITE-CT to reject a vendor's proposal, irrespective of any other consideration.

## **2.2 Other Conditions**

### **2.2.1 Other Rights Reserved**

The HITE-CT, at its sole discretion in determining that its best interests would be served, reserves the right to:

- 1) Amend or cancel this RFP at any time prior to contract award,
- 2) Modify deadlines through amendments to this RFP,
- 3) Refuse to accept, or return accepted proposals that do not comply with procurement requirements,
- 4) Reject the proposal of any vendor in default of any prior contract or for misrepresentation of material presented,
- 5) Reject any proposer's response that is received after the deadline,
- 6) Reject any proposal which is incomplete or in which there are significant inconsistencies or inaccuracies,

- 7) Accept or reject any or all proposals submitted for consideration in whole or in part; and to waive technical defects, irregularities, or omissions,
- 8) Allow no additions or changes to the original proposal after the due date specified herein, except as specifically requested and authorized by the HITE-CT Board,
- 9) Require organizations, at their own expense, to submit written clarification of proposals in a manner or format that the HITE-CT may require,
- 10) Require organizations, at their own expense, to make oral presentations at a time selected and in a place provided by the HITE-CT. Invite vendors, but not necessarily all, to make an oral presentation to assist the HITE-CT in their determination of award. HITE-CT further reserves the right to limit the number of vendors invited to make such a presentation. The oral presentation shall only be permitted for purpose of proposal clarification and not to allow changes to be made to the proposal,
- 11) Negotiate separately any service in any manner necessary,
- 12) Contract with one or more vendors who submit proposals,
- 13) Consider cost and all factors in determining the most advantageous proposal for the HITE-CT, and
- 14) Contract for all or any portion of the scope of work or tasks within this RFP.

### **2.2.2 Remedies**

Remedies associated with nonperformance, substandard performance, or unacceptable performance will include non-financial remedies. Examples of remedies include, but are not limited to:

- 1) Corrective action plans to be developed and implemented by the vendor, subject to HITE-CT approval.
- 2) Accelerated monitoring of vendor performance by the HITE-CT or its designee, including access to vendor facilities, records, and personnel.
- 3) Additional or ad hoc reporting by the vendor, at no cost to the HITE-CT, to address performance issues.
- 4) Pass-through of a proportional share of federal disallowances and sanctions/penalties imposed on HITE-CT and resulting from the vendor's performance or non-performance under the system services agreement.

### **2.2.3 Control of RFP Events and Timing**

The timing and sequence of procurement events associated with from this RFP will be determined solely by the HITE-CT.

### **2.2.4 Proposal Expenses**

The HITE-CT assumes no liability for payment of any costs or expenses incurred by any vendor in responding to this RFP.

### **2.2.5 Ownership of Proposals**

All proposals submitted in response to this RFP and upon receipt by the HITE-CT shall become the sole property of HITE-CT.

### **2.2.6 Oral Agreement or Arrangements**

Any alleged oral agreements or arrangements made by vendors with any State agency, employee, or HITE-CT Committee member, HITE-CT Board member, or HITE-CT employee or will be disregarded in any HITE-CT proposal evaluation or associated award.

### **2.2.7 Vendor Presentation of Supporting Evidence/Surety**

Vendors must be prepared to provide any evidence of experience, performance ability, and/or financial surety that HITE-CT deems to be necessary or appropriate to fully establish the performance capabilities represented in their proposals.

### **2.2.8 Vendor Presentation of Proposed Products**

Vendors must be able to confirm their ability to provide all proposed services. Any required confirmation must be provided at a site approved by HITE-CT and without cost to HITE-CT.

### **2.2.9 Vendor Misrepresentation or Default**

The HITE-CT will reject the proposal of any vendor and void any award resulting from this RFP to a vendor who materially misrepresents any product and/or service or defaults on any HITE-CT contract.

### **2.2.10 HITE-CT Fiscal and Product Conformance Requirements**

Any product acquisition resulting from this RFP must be contingent upon contractual provisions for cancellation of such acquisition, without penalty, if the applicable funds are not available for required payment of product and/or service costs or if the product and/or service fails to meet minimum HITE-CT criteria for acceptance

### **2.2.11 Corporate Reporting**

Upon request by HITE-CT, the State of Connecticut and/or DOIT, the vendor must provide:

- 1) A Certificate of Authority, Certificate of Legal Existence or Certificate of Good Standing, as applicable, from the Connecticut Secretary of the State's Office, prior to the execution of the contract;
- 2) A tax clearance statement from the Department of Revenue Services within sixty (60) days of the execution of the contract; and,
- 3) A statement from the Department of Labor regarding employee contributions within sixty (60) days of the execution of the contract.

### **2.2.12 Prime Vendor**

The HITE-CT will only enter into a contract with a prime vendor who will be required to assume full responsibility for the delivery/installation of the products, and/or services identified in this RFP, whether or not the equipment, products, and/or services are manufactured, produced, or provided by the prime vendor.

### **2.2.13 Use of Subcontractors**

Responding vendors must indicate, the names of any intended subcontractors. Any requirements of the RFP that apply to successful bidder will be required of each of the intended subcontractors. This includes compliance with all statutes that pertain to the successful bidder. Provide a separate response

### **2.2.14 Freedom of Information Act**

Due regard will be given for the protection of proprietary information contained in all proposals received; however, vendors should be aware that all materials associated with the procurement are subject to the terms of the Freedom of Information Act (FOIA) and all rules, regulations and interpretations resulting there from. **It will not be sufficient for vendors to merely state generally that the proposal is proprietary in nature and not therefore subject to release to third parties. Any proposal that makes such a general or overarching claim may be subject to disqualification. Those particular sentences, paragraphs, pages or sections which a vendor believes to be exempt from disclosure under the Act must be specifically identified as such.** ALL SUCH MATERIAL MUST BE SUBMITTED IN A SEPARATE SEALED ENVELOPE AND MARKED "CONFIDENTIAL". THIS INCLUDES ANY INFORMATION REQUESTED IN AN ELECTRONIC FORMAT.

Convincing explanation and rationale sufficient to justify each exemption consistent with the Act's Section 1-210 of the Connecticut General Statutes, must accompany the proposal. The rationale and explanation must be stated in terms of the prospective harm to the competitive position of the vendor that would result if the identified material were to be released and the reasons why the materials are legally exempt from release pursuant to the above cited statute. Please refer also to *Section 2.2.22 - Ownership of the System*.

Between the vendor and HITE-CT, the final administrative authority to release or exempt any or all material so identified rests with the HITE-CT.

### **2.2.15 Authorized to Work on Project**

A vendor receiving an award from this RFP must certify that all personnel are legally authorized to work on the project, pursuant to State and Federal guidelines, policy, mandates, and statutes, and further attest, under penalty of perjury, that all proposed project staff, whether named in the proposal or not, are one of the following:

- ◆ A citizen or national of the United States
- ◆ A Lawful Permanent Resident
- ◆ An Alien authorized to work until all project responsibilities have been fulfilled

Vendor must agree that each individual proposed at any time to perform activities on the project will be subject to an individual certification of authorization to work on the project. Any individual on the proposed project team that is eligible to work in the United States under an H1B Visa must have sufficient time remaining on their Visa to ensure that such an individual is able to complete the requirements of this RFP before their Visa expires. For submitted personnel to be eligible to actively participate in the project, they must be able to successfully pass a U.S. or Canadian background check, and must complete a State of Connecticut background check.

## **2.3 Key Personnel**

The vendor must certify that all personnel named in their proposal shall actually work on the contract in the manner described in their proposal. No changes, substitution, additions or deletions shall be made unless approved in advance by the HITE-CT, which approval shall not be unreasonably withheld. In addition, these individuals shall continue for the duration of the Contract, except in the event of resignation or death. In such event, the substitute personnel shall be approved by the HITE-CT.

During the course of the Contract, HITE-CT reserves the right to approve or disapprove the vendor's or any subcontractor's staff assigned to the Contract, to approve or disapprove any proposed changes in staff, or to require the removal or reassignment of any Contractor employee or subcontractor employee found unacceptable by the State. Replacement of personnel who leave the Project shall be made within thirty (30) days. Replacement of any personnel shall be with personnel of equal ability and qualifications and subject to approval by the State.

Any key personnel assigned by the vendor tasked with management of the project must employ the \_\_\_\_\_ use \_\_\_\_\_ of MS Project for the purposes of reporting project status to the HITE-CT.

### **2.3.1 Ownership of the System and Workflows**

The vendor, upon acceptance by HITE-CT of any computer code developed or customized as a result of this RFP, shall grant to HITE-CT the right to the source code in the event that the bidder is no longer providing services to HITE-CT. The vendor agrees not to copyright or disclose proprietary HITE-CT processes and workflows. Generic processes and workflows discovered during the execution of this RFP project work may be incorporated into vendor's products and services provided that written approval is obtained from HITE-CT.

### **2.3.2 Encryption of Confidential Data**

Contractor, at its own expense, shall keep and maintain in an encrypted state any and all electronically stored data now or hereafter in its possession or control located on non- HITE-CT or managed devices that the HITE-CT, in accordance with existing state policies, classifies as confidential or restricted. The method of encryption shall be compliant with encryption requirements of the HIPAA Security Rule. It shall be the Contractor's continuing obligation to comply with the aforementioned principles, best practices and standards as they may be amended from time to time. In the event of a breach of security or loss of HITE-CT data, the Contractor shall notify HITE-CT as soon as practical but no later than 24 hours after the Contractor discovers or has reason to believe that a breach or loss has occurred or that such data has been compromised through breach or loss.

### **2.3.3 Rights to Audit**

Responding vendors agree to provide the HITE-CT and/or their representatives' access to vendor documents, papers, or other records pertinent to the RFP response in order to make audits, examinations, excerpts and transcripts.

## **2.4 Warranty**

The vendor shall represent and warrant in the proposal that the System shall function according to the RFP requirements, usability, patient safety, and vendor's written specifications and that it shall be free from defects in materials and workmanship for a minimum period of one year after the HITE-CT acceptance of the System.

Vendor shall represent and warrant that the vendor shall modify, adjust, repair and/or replace said System as HITE-CT deems it to be necessary or appropriate to have it perform in full accordance with the terms and conditions of the RFP.

### **2.4.1 Independent Price Determination**

The vendor must warrant, represent, and certify in the Transmittal Letter that the following requirements have been met in connection with this RFP:

The costs proposed have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition as to any matter relating to such process with any other organization or with any competitor.

Unless otherwise required by law, the costs quoted have not been knowingly disclosed by the vendor on a prior basis directly or indirectly to any other organization or to any competitor.

No attempt has been made or will be made by the vendor to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.

The vendor did not directly participate in the RFP development process, had no knowledge of the specific contents of the RFP in its final form prior to its issuance, and that no member of HITE-CT participated directly or indirectly in the vendor's proposal preparation.

### **2.4.2 Offers of Gratuities**

The vendor must warrant, represent, and certify in the Transmittal Letter that no elected or appointed official or member of HITE-CT has or will benefit financially or materially from this procurement. Any contract and/or award arising from this RFP may be terminated by HITE-CT if it is determined that gratuities of any kind were either offered to or received by any of the aforementioned officials or members from the vendor, the vendors agent(s), representative(s) or member(s) after the issuance of the RFP as part of the procurement process.

### **2.4.3 Readiness of Offered Products**

The vendor must warrant, represent and certify in the Transmittal Letter that all System products (software, hardware, operating system, etc.), as applicable, offered to HITE-CT in the proposal must be currently manufactured and available for general sales, lease, or licenses on the date the proposal is submitted. Any proprietary products must be identified as such.



## 2.4.4 Inspection of Work Performed

Expenditures by successful bidder will be subject to audit. Vendors submitting proposals for funding must agree to cooperate by providing information for audit and a full review of the project. This requirement also applies to any subcontractors who may be engaged by the vendor.

## 3 Typical Activities Conducted after RFP Issuance

### 3.1 Vendor Communication

#### 3.1.1 Procurement Schedule

The following schedule has been established for this procurement, however, the ultimate timing and sequence of procurement events resulting from this RFP will be determined by HITE-CT.

Event Date	Event
April 14, 2011	RFP Issued
April 25, 2011	Vendor Questions Due to State – 5:00 PM EDT
May 2, 2011	Notice of Intent to Propose: Each prospective bidder must submit written notice of its intent to submit a proposal to this RFP to Jacqueline Shirley State of Connecticut Department of Information Technology 101 East River Drive East Hartford, Connecticut 06108, <a href="mailto:jacqueline.shirley@ct.gov">jacqueline.shirley@ct.gov</a> , (860) 622-2327
May 9, 2011	Response to Vendor Questions
May 13, 2011	Proposal Submissions Due – 2:00 PM EDT
May 27, 2011	A short list of potential Vendors will be selected
June 10, 2011	Short list vendors will be asked to present demonstrations of the product(s) which they propose via web-based conferencing. Demonstrating the exchange of clinical documents between one or more CT stakeholder EMR products and the infrastructure service provider. These demonstrations should show ‘out-of-the-box’ integration with the EMR products or otherwise indicate the degree of configuration required to accomplish the demonstration. These demonstrations will use test patients and will not include actual protected health information. These demonstrations are requested to be performed using real systems and/or vendors identified in the project objectives section of this document, and will constitute an initial phase of the HITE-CT pilot efforts. These meetings will be completed by the week of June 10, 2011

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June 24, 2011	Selection of vendor
June 24, 2011	Estimated Start of Contract Negotiations
July 18, 2011	Construction of the operational infrastructure and processes for project Infrastructure by the selected vendor, and the implementation of the selected service and associated software components shall be completed by the selected vendor and ready for testing.  Implementation of the pilot of the new system, supporting software and associated processes, including all HITE-CT pilot sites identified in this document.
August 5, 2011	Pilot Testing of the selected vendor processes and new service and associated software components. The selected vendor will perform this. Testing will include interoperability testing between HITE-CT pilot site Document Sources, Document Consumers, Patient ID sources, Patient Identity Consumers, and XCA gateways identified in the project objectives section of this document.
On or before August 15, 2011	Demonstration of production-ready integrated solution for HITE-CT members and community stakeholders.
On or before September 1, 2011	Begin deployment with providers that are ready and willing

### 3.1.2 Vendor's Questions

The State, on behalf of HITE-CT, intends to answer questions from any vendor that is considering a response to this RFP. Questions received by the Contracts and Purchasing Division (CPD) up to the vendor deadline of April 25, 2011 **at 5:00 PM EDT** will be answered. Address any inquiries to Jacqueline Shirley. Only written inquiries will be accepted via e-mail at [jacqueline.shirley@ct.gov](mailto:jacqueline.shirley@ct.gov). To properly process vendor questions, vendors shall ensure that the RFP number **HITE-CT2001** is on the subject line of the electronic mail message.

Questions shall be included as Microsoft Word or compatible format, as an attachment. Response to vendor questions will be posted on the DOIT procurement website as soon after the question deadline as possible.

### 3.2 RFP Response Coordination and Review

The State, on behalf of HITE-CT, will open only those proposals received by the date and time specified in *Section 4.1 – Proposal Submission*.

Proposals received after the due date will be returned unopened. Vendors who are hand-delivering proposals will not be granted access to the building without a photo ID and should allow extra time for security procedures. Immediately upon opening, the State will review each proposal for vendor compliance with the instructions and conditions set forth in this RFP and the attachments hereto. DOIT, at its option, may seek vendor retraction and clarification of any discrepancy/contradiction found during its review of proposals. The Evaluation Team will evaluate only proposals complying with the submission and formatting requirements of this RFP.

### **3.3 Proposal Evaluation**

#### **3.3.1 Proposal Review Team**

HITE-CT in its sole discretion will establish a proposal review team to review responses to this RFP.

#### **3.3.2 Evaluation Process**

HITE-CT will conduct a comprehensive, fair and impartial evaluation of proposals received in response to this procurement. The evaluation process will include not only evaluations of the entire vendor RFP responses, but may include evaluations of vendor references, on-site demonstrations and other relevant sources of information regarding a vendor and its products and services.

HITE-CT will evaluate requested proposal information against all RFP requirements, using criteria and methodology pre-established in coordination with the planned users of a given service. Proposals will be evaluated as describe in section *1.4 Evaluation* of this document. Additionally, HITE-CT will also evaluate the responding vendor's:

- Understanding of the RFP as shown by the thoroughness of the vendor's proposal and the vendor's ability to provide the products and/or services as specified,
- How well the vendor's product functionality matches defined business and technical requirements,
- How well the vendor's proposed product design and technology matches defined technical requirements,
- The vendor's ability to align with the HITE-CT overall goals and long-term direction
- The vendor's ability to deliver the required products and/or services in accordance with the Project Implementation Summary as defined in Attachment 15, as may be amended by the HITE-CT in its sole discretion.

#### **3.3.3 Establish and Conduct Applicable Vendor Demonstrations or Proof of Concepts**

HITE-CT will determine the nature and scope of any demonstrations or proof of concepts that it may deem to be necessary or appropriate to the evaluation of vendor System proposals:

On the basis of the replies to the RFP document, a short list of potential Vendors will be selected by May 27, 2011, and this group will be asked to present demonstrations of the product(s) which

they propose via web-based conferencing Demonstrating the exchange of clinical documents between one or more CT stakeholder EMR products and the infrastructure service provider. These demonstrations should show ‘out-of-the-box’ integration with the EMR products or otherwise indicate the degree of configuration required to accomplish the demonstration. These demonstrations will use test patients and will not include actual protected health information. These demonstrations are requested to be performed using real systems and/or vendors identified in the project objectives section of this document, and will constitute an initial phase of the HITE-CT pilot efforts. These meetings will be completed by the week of June 10, 2011.

### **3.3.4 Vendor Demonstrations or Proof of Concepts: Purpose and Scope**

HITE-CT will use vendor demonstrations or a proof of concept to validate a vendor's proposal, to satisfy given operating requirements, and to ascertain the adequacy and timeliness of system responses, and to verify that business and technical requirements have been met.

- ◆ A vendor demonstration may be a series of vendor conducted and lead tests to demonstrate to the HITE-CT the vendor's ability to perform as required.
- ◆ A Proof of Concept (POC) is a targeted set of transactions and test cases which will allow the HITE-CT to confirm that the vendor proposed solution can satisfy the requirements deemed critical and/or high risk before significant investment is made in the vendor solution. The POC is a small-scale but “live” application of the solution. A POC is not a “full blown” system or user acceptance test cycle.

### **3.3.5 Live Demonstrations and Proof of Concepts to HITE-CT**

HITE-CT requires vendors to conduct demonstrations or POCs at a mutually agreed upon site and at no cost to HITE-CT. Should the demonstration or POC site be beyond the regional area of Hartford, Connecticut then the vendor will be responsible for necessary travel, meals and lodging arrangements and expenses for a team of up to three (3) individuals. The evaluation of any and all live demonstrations shall be subject to a review and approval of HITE-CT or an evaluation committee thereof.

Vendors must indicate agreement that HITE-CT will be permitted to videotape demonstrations or POCs

HITE-CT reserves the right to request that vendors make additional presentations, either in person or by telephone, to the Evaluation Team to clarify their proposal and respond to questions from the Evaluation Team regarding their proposal. HITE-CT also reserves the right to require additional written documentation to support and clarify information provided in the proposal. Failure to respond to such requests may, at the discretion of the Evaluation Team, result in disqualification of the vendor from further consideration.

### **3.3.6 Implement Necessary Agreements**

Successful bidder shall enter into a contract in a form acceptable to HITE-CT. If, after a reasonable period of time as determined by HITE-CT, the bidder that receives the notice of award and HITE-CT are unable to negotiate a contract acceptable to HITE-CT, HITE-CT reserves the right to select another bidder.

### 3.3.7 Notification of Awards

HITE-CT will notify vendors who submit proposals as to any award issued by the HITE-CT as a result of this RFP.

## 4 Proposal Requirements

### 4.1 Proposal Submission

Vendor proposals in response to this **RFP# HITE-CT2001** MUST be received at:

Department of Information Technology  
Division of Contracts and Purchasing  
ATTN Jacqueline Shirley  
101 East River Drive, Room #4074  
East Hartford, CT 06108

No later May 13, 2011 **at 2:00 PM (EST)** in order to be considered. Postmark dates will not be considered as the basis for meeting any submission deadline. Therefore, any vendor proposal received after the deadline will not be accepted. Receipt of a proposal after the closing date and/or time as stated herein shall not be construed as acceptance of the proposal as the actual receipt of the document is a clerical function. If delivery of proposals is not made by courier or in person, the use of certified or registered mail is suggested. **Proposals will not be publicly opened on or before the due date.**

The submittal of proposals shall constitute, without any further act required of the vendors of HITE-CT, acceptance of the requirements, administrative stipulations and all of the terms and conditions of the RFP and all its attachments.

## 5 Vendor Response - Table of Contents

Responding vendors must restrict and order their responses in each of the two binders in accordance with the following three (3) tables of content for Parts I, II and III. Please refer to *Sections 7-9* of this document for a detailed description of each section.

Table of contents for Vendor, Business, and Technical Proposal:

Section I – Vendor, Business, and Technical Proposal	
I.A.1	Completed and Executed Mandatory Forms and Documents
I.A.1.1	Transmittal Letter
I.A.1.2	Mandatory Vendor Questionnaire
I.A.1.3	Vendor Validation and Authentication Statement

Section I – Vendor, Business, and Technical Proposal	
I.A.2	Executive Summary
I.A.3	Company Overview
I.A.4	Summary of Qualifications
I.A.4.1	Related Products and Services
I.A.4.2	Comparable Application Products and Services
I.A.5.1	Financial Overview
I.A.5.1.1	Financial Status
I.A.5.1.2	Copy of Annual Statement (Public Companies Only)
I.A.6	Vendor Customer References
I.B.1	Overview of the Proposed Solution
I.B.2	Functional, non-functional and technical requirements overview
I.C.1	Architecture Overview
I.D.1	Regulatory and Quality Overview
I.E.1	Training Overview
I.F.1	Support and Maintenance Overview

Table of contents for Project Management, Planning and Staffing Proposal:

Section II – Project Management, Planning and Staffing Proposal	
II.1	Executive Summary
II.2	Meeting the Requirements for Project Management, Planning and Staffing
II.2.1	Satisfying Milestone Driven Work Plans

II.2.2	Phased Go/No Go phased decision points
II.2.3	Sign off and approval meetings
II.2.4	Change Management Process
II.2.5	Communication Plans
II.2.6	Project Planning using MS Project 2003 – Schedule, Task & Resources
II.3	System Development Methodology (SDM); phase-based deliverables
II.3.1	Design Phase
II.3.2	Construction Phase
II.3.3	Testing Phase
II.3.4	Implementation Phase
II.3.5	Post Implementation Phase
II.4	Biographical Summaries
II.5	Team Resumes

Table of contents for Financial Proposal:

Section III – Financial Proposal	
III.1	Executive Summary
III.2	RFP Attachment 1 - Vendor Proposal Cost Worksheets

## 6 General Formatting Requirements

The content of the Vendor's response between hardcopy and electronic submissions must be exactly the same.

### 6.1 Binding the Proposal

The original hardcopy, which must be clearly identified and signed, and each additional hardcopy of the proposal must be bound using loose leaf style binders; with the proposal sections being bound as described above. **Proposals that are submitted that use Spiral, Wire Form, GBC or Perfect Bound, type of binding materials are not acceptable.**

Each hardcopy binder cover slip must include the responding Vendor's name, address and the

RFP number (RFP# HITE-CT2001) as reference in the lower right corner. Titles for the appropriate sections shall be centered on the cover slip. The spine of each binder must contain the proper section title, with the RFP number reference and the submitting Vendor's name.

## 6.2 Formatting the Proposal's Content

HITE-CT is providing the following formatting expectations to ensure a uniformity of presentation. The body of the narrative material should be presented using the following formatting guidelines:

1. Text shall be on 8 ½" x 11" paper in the "portrait" orientation, except where a supplied template is in "landscape" orientation,
2. Text shall be single spaced,
3. HITE-CT prefers a Sans Serif baseline font for the body of the document with a font pitch no smaller than 11 points,
4. The margin at the binding edge of any document shall be a minimum of one and one half inches (1 ½"), all other margins shall be one inch (1"),
5. Inline graphics or illustrations shall be clean and crisp in appearance must be captioned appropriately,
6. Any graphics or illustration may have a smaller text spacing, pitch and font size but must be legible,
7. Oversize attachments or appendices should not exceed more than one fold to conform to 8 ½" X 11",
8. Resumes must be in a consistent format; but, they do not need to conform to the formatting guidelines for the proposal itself.

## 6.3 Electronic Versions (CD ROM)

The vendor is expected to provide the HITE-CT with 12 sets of electronic versions of the proposal. These electronic versions are to be submitted using CD-ROM media, formatted for use with computers using the Microsoft Windows operating system. The two sets are to be submitted in the following manner:

**CD-ROM Set #X**      CD-ROM 1: Section I – Vendor, Business, and Technical Proposal

Section II – Project Management and Staffing Proposal

CD-ROM 2:      Section III- Financial Proposal

**CD-ROM Set #X**      CD-ROM 1: Section I – Vendor, Business, and Technical Proposal

Section II - Project Management and Staffing Proposal



Each CD must be submitted in a protective case and must be clearly labeled on the cover and spine in a manner consistent with the hardcopy submission. In addition, the CD itself must be labeled with the RFP reference and the caption “*CD ROM n of X*”, where *n* is the sequence number of the CD in the set.

Electronic versions of the proposal are to be rendered in the PDF file format, using Adobe Acrobat or a compatible product. The PDF document must be created with Fast Web View; tagged PDF must be enabled, and the electronic version must contain a master table of contents supporting hyperlinks to each entry in the table of contents and a link to the master table of contents on each page.

Also, electronic versions of the vendor worksheet attachments and appendices (e.g. Attachment 1 & Appendices A, B, C & D) are expected to be submitted in the original Microsoft Word or Excel format as well as rendered in PDF file format.

The contents of the CD-ROMs must be organized intuitively. For example, vendors can create directory and subdirectories to categorize content in a logical way. It’s desirable that there are no files in the root directory of the CD-ROM other than the home directory for each of the sections that are appropriate for that CD.

Vendor marketing materials or other information not specifically related to the content of the RFP should not be included as part of the electronic version.

## **7 Section I - Vendor, Business, and Technical Proposal**

All proposals in response to this RFP must specify the vendor's unequivocal acceptance of all the requirements of this RFP and must reflect written compliance to all its requirements.

Proposals must include a Table of Contents that includes sections and subsections with page numbers. Vendors are encouraged to ensure that the Table of Contents is updated prior to publishing the proposal.

### **7.1 Completed and Executed Mandatory Forms and Documents (I.A.1)**

These mandatory documents are included in RFP Attachments. They are required to completed, signed and notarized, if necessary. The original mandatory forms and documents will be included in the signed master/original bound proposal. Additional print and electronic versions of the proposal will contain copies of the original. NOTE: Selected bidder will be required to execute a contract with HITE-CT, and will be required to comply with any and all state contracting laws that apply to quasi-public agencies.

#### **7.1.1 Transmittal Letter**

Proposals must include a Transmittal Letter addressed to the Director, Contract and Purchasing Division, DOIT, which must be in the form of a standard business letter, signed by an individual authorized to legally bind the vendor.

The letter shall include the name, title, mailing address, telephone number and extension, fax number as well as a valid email address for the person that the State is to contact to resolve questions or issues regarding the submitted proposal. The transmittal letter must contain specific statements, cross-referenced to the State administrative requirements stipulated in *Section 2* of the RFP, to establish the vendor's full acceptance of all such requirements.

### **7.1.2 Mandatory Vendor Questionnaire (I.A.1.2)**

Include completed RFP Attachment 01 - Mandatory Vendor Questionnaire.

### **7.1.3 Vendor Validation and Authentication Statement (I.A.1.3)**

Include completed RFP Attachment 04 - Vendor Validation and Authentication Statement.

## **7.2 Executive Summary (I.A.2)**

This RFP expects that an Executive Summary will be part of each of the three Sections. This is to permit a vendor to briefly summarize the most salient aspects of each section of the proposal in terms of satisfying the requirements presented in this RFP. The Executive Summary must provide a high-level overview of the vendor's proposal in such a way as to demonstrate a broad understanding of the RFP requirements. The vendor must summarize their understanding of the objectives of HITE-CT in issuing this RFP, the intended results of the Project, the scope of work and any issues which the vendor believes needs to be addressed in this Project. The Executive Summary shall not mention the dollar amount proposed for the project.

## **7.3 Company Overview (I.A.3)**

Vendors must provide historical, financial, sales, and organizational information and, if applicable, similar information for proposed subcontractors:

Provide a brief summary of the company discussing size, markets, customer base, company organization, strengths and achievements. If the company is a subsidiary of another company, the name and address of the parent company must be provided.

The HITE-CT is seeking organization and client profile information, which may include their resellers or implementation partners. The minimum information required is:

1. Formal Company Name
2. Company Trade Name (If Different)
3. Physical Address
4. Mailing Address
5. Corporate TIN
6. Company Representative Contact Information
  - a. RFP Response Contact Person
  - b. Title
  - c. Daytime Telephone & Extension
  - d. Electronic Mail Address
  - e. Company Web Site

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7. Publicly or Privately Held
8. Stock Symbol (Public Companies)
9. Corporate Status (C Corporation, 501(C) 3, LLC, etc.)
10. Date of Incorporation
11. State of Incorporation
12. Number of Business Locations
13. Address and Description of offsite Development Center(s)
  - a. Address
  - b. Management Structure / Organization Chart
14. Number of Employees
15. Number of Developers
16. Number of Help Desk or Support Staff
17. Number of Active Government Clients or Customers
18. Years of Experience with projects of similar scope and complexity
19. Resellers or Partners & Nature of Partnership
20. References (Name, Title, Mailing Address, Work Phone, Email Address) – See section 3.6.

The HITE-CT desires that this information be provided in a tabled format, for example:

<b>COMPANY PROFILE – SAMPLE SOLUTIONS, INC.</b>	
<b>Formal Company Name</b>	<b>Sample Solutions, Inc.</b>
<b>Company Trade Name</b>	<b>Sample Consulting</b>
<b>Physical Address</b>	<b>123 Easy Street, Suite 1000 Anytown, CA 90266</b>
<b>Mailing Address</b>	<b>P.O. Box 123456 Anytown, CA 90266-1234</b>
<b>Corporate Tax Identification</b>	<b>35-1234567</b>
<i>and so forth...</i>	

## **7.4 Summary of Qualifications (I.A.4)**

Qualifications must contain a detailed description of the proposing firm and subcontractors (if applicable).

### **7.4.1 Related Products and Services (I.A.4.1)**

Vendors must list the most recent examples of the requested products or service being implemented. If this is an application installation, examples of systems in production are encouraged. A maximum of five (5) examples may be provided. Please indicate the total number of installations of the version of the system and supporting services being proposed. Details of other relevant information technology experience, which would be valuable in the completion of this project, may be provided. If applicable, provide relevant experience and qualifications for all proposed subcontractors.

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Please also provide responses to the following:

Question	Response
7.4-1 Evidence of current HIE services and existing client satisfaction	
7.4-2 Skills and industry certifications of provider personnel	
7.4-3 The ability to successfully manage the project timeline	
7.4-4 Bidder can respond to evolving HITE-CT requirements	
7.4-5 Where a collaborative response among multiple vendors is proposed, please provide any evidence of implementations of the partnered vendor products	
7.4-6 Describe any experiences with <ul style="list-style-type: none"> <li>• interoperability with immunization registries</li> <li>• supporting exchange of continuity of care documents</li> <li>• supporting exchange of laboratory results</li> </ul>	

Please provide the following details for each deployed HIE using your services:

Name of HIE	Features (data mining, eRX, quality, etc.)	# of Physician EHRs	# Hospital Connections	# Agency Connections (which agencies)	Phone/contact	# of patients	# of physicians	# prescribers (physician/non-physicians)	Hospital Reference Labs	Private Labs

## 7.5 Financial Overview (I.A.5)

Elaborate on company trends, current sales data, or any other financial information that may differentiate vendor from other proposals.

### 7.5.1 Financial Overview (I.A.5.1)

Sales in dollars for the three most recent years must be given, along with an audited financial statement (e.g. Profit & Loss) for the last fiscal year. Vendors must also provide revenue attributable to the sale of integrated information technology systems, either produced or integrated over the three most recent years. All financial penalties and liquidated damages imposed in the last three (3) years must be disclosed. If none, state so.

### **7.5.2 Copy of Annual Statement (I.A.5.2)**

If the vendor submitting the RFP response or any of the subcontractors specified is publicly traded, please attach the most recent audited financial report(s) or annual statement(s).

### **7.6 Vendor Customer References (I.A.6)**

Vendors must provide three (3) Client references with products or services comparable to that being proposed for HITE-CT, preferably customers in a similar industry, with a similar growth profile. Reference information must include:

- ◆ Name and Address of Customer, Organization, or State Agency.
- ◆ Contact Person, Title, Current Phone, Address and electronic mail address, Role for the product deployment.
- ◆ Days of week and times that person can be contacted.
- ◆ Date of Installation
- ◆ EHR vendor systems connected to the installed HIE services (through native EHR IHE profile support, through adapted interface/transformation service)
- ◆ Transformation services supported for installed HIE
- ◆ Other value added services provided to the HIE (e.g. quality/quality relay, public health reporting, etc.)
- ◆ Was project or product deployment of similar size and scope as outlined in this RFP?
- ◆ Configuration/Hardware & Software
- ◆ # of Providers, Patients, System interfaces, size of Database, or other factors that will help to determine size/scale of application solution.
- ◆ Complexity or user interfaces or system interfaces.
- ◆ Portal features offered

### **7.7 Overview of Proposed Solution (I.B.1)**

Vendors are asked to briefly summarize the proposed solution including how they intend on satisfying the business and technical requirements. While this narrative should not be lengthy, it should provide the reader with a general understanding of the nature of the proposed solution and, specifically, how the responding vendor believes this will meet the objective of this RFP and the requirements found therein.

### **7.8 Architecture Overview (I.C.1)**

Vendor must present a detailed architecture design for the proposed application along with a text description and annotated diagram (or diagrams). Any descriptions and diagrams must clearly identify middleware products, interfaces, message formats and component function. Each description/diagram should be accompanied by a narrative indicating where the proposal meets HITE-CT technical guidelines and where exceptions will occur.

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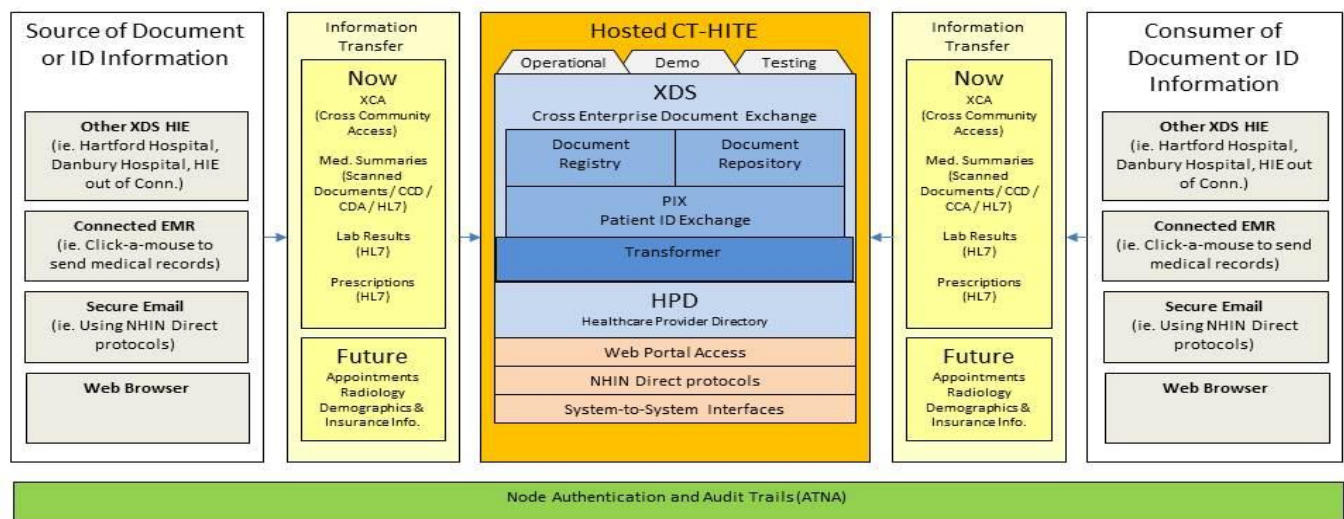


Figure 1: HITE-CT System Services Capabilities

Vendors may bid on these capabilities separately or as a whole.  
Please provide the list of the Services for which you are submitting a bid.

Y/N	Service	Prime/Partner offering service	Underlying technology Vendor
	Patient Identity Resolution – PIX Manager		
	Document Registry		
	Document Repository		
	Audit Record Repository		
	Cross-Community Gateway (Initiating, Responding)		
	Healthcare Provider Directory		
	Identity Management (CA)		
	Transformation Services		
	Web Portal		
	eRx gateway		
	Other (Describe)		

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Please respond to each of the following attaching additional sheets and referencing the question number :

Question	Response
<b><i>Privacy and Security</i></b>	
7.8-1 Give details of your business continuity arrangements.	
7.8-2 Describe the specific administrative physical and technical safeguards you have taken to assure the confidentiality, integrity, and availability of ePHI <ul style="list-style-type: none"> <li>Describe support for BPPC, including consent capture, and policy enforcement. This includes not only capture of patient consents (whether opt-in or opt-out), but also the ability to mark the documents using the BPPC profile as restricted (e.g. HIV, Substance Abuse, Mental Health), routine, or other policy-based criteria as defined by HITE-CT.</li> </ul>	
7.8-3 Describe or provide your policies and procedures documenting compliance with HIPAA security standards	
7.8-4 Describe security safeguards in place and auditing methodology to assess security of ePHI	
7.8-5 Describe physical safeguards in place to protect ePHI, equipment (e.g. facility access, passwords, inventory and equipment, etc.)	
7.8-6 Have you had any instances of data breach? If so, please describe the breach, how it was handled, and the outcome.	
7.8-7 Do you serve as BA to other Covered Entities? Provide this service to any other Health Information Exchange?	
<b><i>Training</i></b>	
7.8-8 Do you offer formal user training?	
7.8-9 What type of courses do you run and what is their duration?	
7.8-10 What level of training would you recommend?	
7.8-11 Describe any training materials offered?	
<b><i>Please provide details of how the product is supported</i></b>	
7.8-12 What levels of support are available, definitions of each level and what are the hours of operation and response times?	
7.8-13 Where are the support services located?	

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Question	Response
7.8-14 Does support include product updates, as well as bug fixes at no extra charge?	
7.8-15 What Help Desk services options do you offer? <ul style="list-style-type: none"> <li>Describe your capabilities</li> <li>Provisioning services</li> <li>Describe your support model, recommended support model, and services</li> </ul>	
7.8-16 What is the helpdesk escalation procedure?	
<p align="center"><b><i>Response to Specific objectives of the project</i></b></p> <p>We are seeking an established service provider to provide hosted information exchange service to support meaningful use exchanges, with the capacity to meet meaningful use criteria as these evolve.</p>	
7.8-17 Establish XDS Document Sharing capabilities for each of the initial Affinity Domain participants and capabilities for enabling new HITE-CT members to establish Document Source capabilities	
7.8-18 Establish XDS Document Source capabilities for the HITE-CT as a transformer service supporting HL7v2.x or other information sources for to support content sharing for systems not yet supporting meaningful use-specified clinical summaries. <ul style="list-style-type: none"> <li>Indicate support for translation to standard vocabularies (e.g. local-codes to LOINC, ICD-9/10 to SNOMED-CT to ICD-10, Medispan to MEDEM (Allergies), etc.),</li> </ul>	
7.8-19 Establish a PIX service for the HITE-CT. This will include Cross Community Access (XCA) integration with current PIX environments for HIEs identified in the project objectives section of this document. This MAY include and Cross-Community 7.8-20 Patient Discovery (XCPD) integration with current PIX environments for these HIEs, and vendor roadmap plans for XCPD support is requested as part of this solicitation. <ul style="list-style-type: none"> <li>Please describe the offering including the algorithmic approaches to identity matching</li> <li>Please describe any services offered for operational handling of identity</li> </ul>	



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Question	Response
linking/delinking and resolving ambiguity in matches	
7.8-21 Establish a Document Registry for the HITE-CT. This will include Cross Community Access XCA integration with current Document Registries for HIEs identified in the project objectives section of this document	
7.8-22 Establish an XDS Document Repository. As a Hosted option for member organizations that are unable or otherwise choose to leverage a hosted resource for document management Federated option for those members that choose to manage their own shared documents.	
7.8-23 Establish XDS Document Consumer capabilities as a portal accessible to each HITE-CT participant. Provide capabilities for new HITE-CT members to establish a Document Consumer interface.  Describe: Where how the Portal can be used for access if the physician does not have an EHR. What features are available including: <ul style="list-style-type: none"> <li>• Orders gateway for test ordering through portal (including ABNs, and Manifests)</li> <li>• patient lists</li> <li>• eRx</li> </ul>	
7.8-24 Establish Audit Record Repository (ATNA ARR). Please describe Fully describe the granularity of the audit log attributes, options for security and privacy, reporting	
7.8-25 Integration with member EHR document source systems as identified in the project objectives section of this document	
7.8-26 Provide a managed hosted service environment subject to IT Infrastructure Library (ITIL) best practices, Quality of Service (QOS), and security requirements as established by the HITE-CT	
7.8-27 Establish Healthcare Provider Directory (HPD) conformant directory supporting NHIN Direct capabilities to enable simplified interoperability between two known endpoints	

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Question	Response
<p>7.8-28 Establish Identity Management for providers supporting NHIN Direct capabilities, whereby the choice of Certificate Authority is that of the provider:</p> <ul style="list-style-type: none"> <li>• subject to identity management policies of HITE-CT</li> <li>• These services should meet relevant state and federal privacy and security requirements and be appropriate to the exchange approach selected.</li> <li>• They should include the ability to ensure the provider receiving the record is authorized and is who they claim to be</li> <li>• They should be federal-bridge certified</li> <li>• Please describe Registration Authority options for the digital identities. What provisions may be made to support Registration Authorities at Provider sites (e.g. hospitals) or within the Department of Public Health?</li> </ul>	
<p>7.8-29 Authentication services</p> <ul style="list-style-type: none"> <li>• The portal access should provide assurance that the authenticated user is authorized to request and retrieve the exchange content subject to HITE-CT consent and access control policy</li> <li>• Prospective vendors should provide details regarding authentication and access control services, capabilities, and roadmap plans</li> </ul>	
<p>7.8-30 Please indicate what functionality is available natively, and what requires customization, and what requires building?</p>	
<p>7.8-31 What is your roadmap for future offerings that we may anticipate?</p>	
<p>7.8-32 HITE-CT requires access to a replica environment for testing and demonstration Please summarize your options for supporting staging/testing and demonstrations/training.</p>	
<p>7.8-33 Please summarize your plans to support and/or interface with the system actors and IHE profiles identified in Attachment 6 of this document. Provide any product IHE integration statements associated with the profiles and system</p>	

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Question	Response
actors for which you are proposing to use in the solution. What product, version, release will support the named profiles?	
7.8-34 Describe any specific HISP services offered directly to providers	
7.8-35 Please provide your company's level of support and involvement in IHE, and in profile development.	
7.8-36 Please provide any Meaningful Use Certifications completed for the products/services offered, or timelines for planned certification testing	
7.8-37 Please describe any options you may support for an ePrescribing Gateway	
7.8-38 Please provide any options you may support for imaging storage	
7.8-39 Please describe any data mining tools you may offer the HIE	
<b><i>Hosting Environment Operational Considerations</i></b> Vendor is expected to provide their provisions and approach to each of the following sub-section topics system requirements described in Attachment 6.	
7.8-40 Describe the size and physical characteristics of the hosting environment	
7.8-41 problem management, troubleshooting, and escalation processes	
7.8-42 compliance/certification requirements	
7.8-43 Disaster Recovery plans and approaches	
7.8-44 Business continuity approaches/redundancies, etc.	
7.8-45 performance reporting	
7.8-46 Security/privacy requirements	
7.8-47 HIPAA training	
7.8-48 Vendor is expected to provide their approach and associated costs to DR plan maintenance.	
7.8-49 Construction and site layout	
7.8-50 Mechanical and Electrical System Redundancy	
7.8-51 Fire Detection and Suppression	
7.8-52 Physical and system security	
7.8-53 Access to facilities for personnel and	

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Question	Response
equipment	
7.8-54 Available space and growth plans	
7.8-45 Telco Access	
7.8-46 No Single Point of Failure	
7.8-47 Redundancy of dataset	
7.8-48 Adherence to industry best practices (e.g. ITIL)	
7.8-49 Service Level Agreements (include response times)	
7.8-50 Ease of operational interaction	
7.8-51 Separation of Test and Production Environments	
7.8-52 Please provide any operational certifications (SAS-70 level 1, SAS-70 level 2, <a href="#">SSAE 16</a> , EHNAC)	
7.8-53 Describe processes and capabilities for upgrades and	
7.8-54 Describe the hosting operations	
7.8-55 Describe Service Desk options	
7.8-56 Describe MPI resolution staffing and options	
7.8-57 Describe configuration processes and options. Please provide configuration manual(s)	
7.8-58 Describe processes and tools for bringing on new providers and data sources as service clients. Please provide: <ul style="list-style-type: none"> <li>• technical and operational documentation</li> <li>• User Manual (Needs to be available to HITE-CT user community)</li> <li>• Administrator manual</li> <li>• Describe any differences in the level of efforts to bring on small practices, hospitals, large group practices, or other such entities</li> <li>• What level of configuration is required for each of these types of systems (i.e. initial connection, configuration, content, etc.)</li> </ul>	
7.8-59 Describe the process to merge or unmerge data by source? Does the vendor need to be contacted to unmerge data? How easy is it to add a user?	

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Question	Response
7.8-60 Describe options and services that you offer for operational management and associated processes as part of your managed services. Associated costs should be included in the financial proposal of your response.	
7.8-61 Describe implementation options for HIE governance processes and how you would propose to interact with HITE-CT stakeholders.	
7.8-62 Describe the business model for support for non-business hours and holidays	
7.8-63 Describe any standard "out of the box" reporting as well as any costs for customized reporting	
7.8-64 Provide details supporting your offerings for leading/facilitating various business processes associated with an HIE services they are handling technically (e.g. member matching fall out, data stewardship, governance & resolution when matching/mapping data across disparate systems, etc.)	
<p align="center"><b><i>HIE Growth Considerations</i></b></p> <p>While not in scope of the initial deployment project, HIE expansion will look toward quality, public health, and PHR opportunities. please describe any plans or offerings of the following features that you may have to offer that may serve HIE Growth</p>	
7.8-65 Describe how they have implemented interoperability with public health immunization and surveillance systems and associated costs.	
7.8-66 Describe any support or experience with case reporting using RFD	
7.8-67 EHR as a service <ul style="list-style-type: none"> <li>Please indicate any Meaningful Use Certifications or other certifications</li> </ul>	
7.8-68 Business intelligence for analytical support of quality or other population-health activities	
7.8-69 Quality Reporting Tools or interfaces supporting quality reporting <ul style="list-style-type: none"> <li>Do you support Multi-Patient Query (MPQ)</li> <li>What protections are available for this interface</li> </ul>	
7.8-70 What population health assessment, monitoring and improvement approaches do you support <ul style="list-style-type: none"> <li>how do they work</li> </ul>	

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Question	Response
<ul style="list-style-type: none"> <li>are there any NQF standards supported</li> </ul>	
<p>7.8-71 What support or interface options do you have for Personal Health Record interoperability</p> <ul style="list-style-type: none"> <li>Current capabilities</li> <li>How are you integrating with PHRs</li> <li>Transport options or other ways to move information between HIE and PHRs</li> <li>Integration/interfacing with patient portals (vendor-specific or standards-based)</li> <li>What options are available for the patient to retrieve a copy of their HIE registered data?</li> </ul>	
<p>7.8-72 E-prescribing capabilities</p> <ul style="list-style-type: none"> <li>what capabilities if any are offered natively</li> <li>Are you partnering with other providers to provide this as a service</li> </ul>	
<p>7.8-73 Any other value added services that they have to offer that we have not requested</p>	
<p>7.8-74 What historical data conversions can you offer</p>	
<p>7.8-75 Please describe your capabilities for supporting the following HIE growth areas:</p> <ul style="list-style-type: none"> <li>Reporting clinical quality measures to CMS or states</li> <li>Supporting Medication reconciliation between care settings</li> <li>Submitting of electronic syndromic surveillance data to public health agencies</li> <li>recording advanced directives for patients 65 years or older</li> <li>submitting of electronic data on reportable laboratory results to public health agencies</li> <li>Sending reminders to patients (per patient preference) for preventative and follow-up care</li> <li>Providing patients with timely electronic access to their health information (including laboratory results, problem list, medication list, medication allergies)</li> </ul>	

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Question	Response
<ul style="list-style-type: none"> <li>Providing visit summaries</li> </ul>	
7.8.76 What can your product offer in support of Opt-in vs opt-out policies	
7.8.77 Please describe any models you support for patient access their records	
<b>General</b>	
7.8-78 Total number of installations of the version of the system and supporting software being proposed. Have you supplied to customers in a similar industry, with a similar growth profile that would act as a reference site for you?	
7.8-79 If you are a VAR, total number of installations of the version of the system and supporting software being proposed, which have been carried out by your organization?	
7.8-80 Describe any third party alliances/relationships or partnering proposed	
7.8-81 Please describe production deployments of any proposed partnered solutions	
7.8-82 Please provide information on your implementation methodology. Attach as required.	
7.8-83 What documentation is provided for the software / system? Please attach, including configuration manuals.	
7.8-84 Provide detailed hardware configuration required/recommended to develop, test, implement, run in production and maintain your product on an ongoing basis. If 3rd-party software is required, list here.	
7.8-85 Please identify the use of any subcontractors, the purpose of the subcontract.	
7.8-86 Identify any need third party licenses. Associated costs shall be included in the financial proposal cost worksheets.	
7.8-872 Describe provisions and support for any data hosted to be exported in standards-based format upon contract termination. Associated costs shall be included in the financial proposal cost worksheets.	

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Provide product version information which must include, but not be limited to, product name, version number, date version was released for general use and number of installed customer entities.

As described in Attachment 6, the HITE-CT Technical Committee has defined an architecture that leverages IHE profiles. Please indicate status of connectathon testing, deployed implementation, roadmap plans if not currently available. Provide IHE integration statements for the profiles listed below, and attach details of installed systems in the references section of your RFP response:

<b>Profile</b>	<b>Product Name/ Version#/ Version release date</b>	<b>If not supported, indicate 'Not Supported'</b>	<b>Implemented, but not Connectathon Tested</b>	<b>Connectathon Tested</b>	<b>Connectathon Tested and in Production at least 1 site (describe sites, what stage, how many entities are connected)</b>
<b>PIX Manager (PIX – PIX Manager)</b>					
<b>PIX Patient Identity Source (Transformation Service)</b>					
<b>Patient Demographics Supplier (PDQ – PDS)</b>					
<b>PIX Consumer/PDQ Consumer</b>					
<b>Audit Record Repository (ATNA ARR)</b>					
<b>XDS.b Registry</b>					
<b>XDS.b Repository</b>					
<b>XDS.b Document Consumer (Web Portal)</b>					
<b>XDS.b Document</b>					



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<b>Profile</b>	<b>Product Name/ Version#/ Version release date</b>	<b>If not supported, indicate 'Not Supported'</b>	<b>Implemented, but not Connectathon Tested</b>	<b>Connectathon Tested</b>	<b>Connectathon Tested and in Production at least 1 site (describe sites, what stage, how many entities are connected)</b>
<b>Source (Transformation Service)</b>					
<b>Basic Patient Privacy Consent (Document Source – service option)</b>					
<b>Basic Patient Privacy Consent (Enforcement – Web Portal)</b>					
<b>Multi-Patient Query (Quality and Public Health Support)</b>					
<b>Document Subscription (Quality and Public Health Support)</b>					
<b>Healthcare Provider Directory (HPD)</b>					
<b>Identity Services Provider</b>					
<b>Cross-Enterprise User Assertion (XUA)</b>					
<b>On-Demand Documents (Registry)</b>					
<b>On-Demand Documents (Document Source)</b>					

<b>Profile</b>	<b>Product Name/Version#/Version release date</b>	<b>If not supported, indicate 'Not Supported'</b>	<b>Implemented, but not Connectathon Tested</b>	<b>Connectathon Tested</b>	<b>Connectathon Tested and in Production at least 1 site (describe sites, what stage, how many entities are connected)</b>
<b>Cross-Community Access (XCA)</b>					
<b>Cross-Community Patient Discovery</b>					

Vendors are required to submit detailed product technical specifications organized as defined in this section.

If vendor can supply more than one unique product type, version or level of their software that meets or exceeds the requirements in this RFP, vendor must clearly state the existence of multiple products, explain the major differences between them and take these additional steps:

- Provide separate Product Version and Architecture sections for each.
- Identify where appropriate that multiple architectural solutions exist.
- Provide clear and separate statements in any proposal sections or sub-sections where there are differences between product versions.
- Provide separate cost schedules and total cost if different in Cost Proposal.
- Identify which is the vendor's preferred solution and why.

## **8 Section II – Project Management, Planning, and Staffing Proposal**

### **8.1 Executive Summary (II.1)**

This RFP expects that an Executive Summary will be part of each of the three Sections. This is to permit a vendor to briefly summarize the most salient aspects of each section of the proposal in terms of satisfying the requirements presented in this RFP. The Executive Summary must provide a high-level overview of the vendor's proposal in such a way as to demonstrate a broad understanding of the RFP requirements. The vendor must summarize their understanding of the objectives of HITE-CT in issuing this RFP, the intended results of the Project, the scope of work and any issues which the vendor believes needs to be addressed in this Project. The Executive Summary shall not mention the dollar amount proposed for the project.

## 8.2 Meeting the Requirements for Project Management, Planning, and Staffing (II.2)

Vendor shall provide a brief overview regarding how organization can satisfy the intended management, planning, and staffing solution. Briefly describe previous project experiences.

Describe the project management methodology to be utilized for all planning and management activities related to the project.

Describe variations to the staffing needs based upon the number of HIE members, the type of members, ratio of staff to membership or other algorithm that you would use to recommend HITE-CT staffing resources. Please provide relevant job descriptions, roles, responsibilities of such staffing resources, and recommendations on how to scale to support HIE growth.

Describe the staffing needed for an individual physician practice, hospital, group practice on an ongoing basis

- For Implementation
  - in pilot stages
  - in preparation leading up to the go-live
- Post-Implementation
  - in the post go-live stages
  - ongoing Maintenance

Please describe the HITE-CT staff, local practice, or hospital staff, required to implement and support your product using the tables below for each of the provider setting scenarios:

### **For Implementation:**

Within IT			
	# FTEs	Technical Skills	Duration (Time Required)
Project Lead/Mgr			
Programmer/Analysts			
DBAs			
Application Architect			
Systems Engineer			
Network Engineer			
Desktop Engineer			
Subject Matter Expert			
Trainer			
Outside of IT (List)			

### **Post -Implementation:**

Within IT			
	# FTEs	Technical Skills	Duration (Time Required)
Project Lead/Mgr			

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Programmer/Analysts			
DBAs			
Application Architect			
Systems Engineer			
Network Engineer			
Desktop Engineer			
Trainer			
<b>Outside of IT (List)</b>			

Provide a complete list of software tools and respective version numbers vendor will use to support all project management planning and reporting activities.

Considering the vendor’s current products and services, how is configuration and change managed for each product deployed at a customer site? Describe your change request process. Describe how you integrate or accommodate customer change request processes. How do you document change? Explain and provide examples of an Impact Assessment for a change request. Explain how you execute a change request and track changes to a product or configuration. Are the configuration and change management procedures documented by vendor?

Describe your Risk and Issue Management procedures. Identify potential risks for this initiative outside of the risks identified in this RFP. Explain how you will be able to identify risks, and mitigate their impact. What policies or procedures have the vendor or customers put into place to mitigate risks? What practices do you recommend?

Provide a statement of acknowledgement that design, construction, testing, implementation, and post implementation/maintenance will use System Development Methodology best practices, including but not limited to: detailed project planning with clearly defined tasks, resources, and timelines, go/no go decision points at key phases of the project, a formal communication plan, risk management and a formal change management process with concomitant updates to the requirements traceability matrix.

Describe your strategy at executing and satisfying “Milestone Driven Work Plans”. Provide evidence on how you have been able to meet the time, quality, and cost expectations of large multi-phase projects. Vendor payments will be tied with satisfying project milestones and deliverables, and not by billing for “Time & Materials”. Describe the fair and reasonable provisions you would like to see in a Milestone Driven Work Plan.

The project plan should include, but not be limited to, Gantt charts showing the time lines, recommended tasks, task dependencies, deliverables, risks, milestones, and resource allocations. It should address what resources will be assigned what major milestones and how these milestones will be completed. Discuss all the elements necessary to satisfy SDM requirements. This project schedule should be sufficiently detailed to provide start and end target dates for each phase of the project. HITE-CT requires that the project plan document be submitted as a Microsoft Project file.

Proposal should address resources provided as well as responsibilities/duties for each resource. Attach organization’s job class descriptions for the members of the project team.

Proposal should identify the following project resources:

- ◆ Roles – what project roles, quantity of staff, and duration are needed for the vendor proposal?
- ◆ Resources – what resources (e.g. equipment, HITE-CT staff, software for project delivery) are needed, when, and how many? Consider what equipment will be necessary for meetings, demos, training, and testing. What resources is vendor providing?
- ◆ Access/Space – what type of access to staff and space be needed? Consider if on-site space is needed to interact with teams. If so, what kind of space (e.g. 2 cubicles or conference room space.)

It is acceptable to attach multiple organization charts, particularly if vendor team composition will be different during project intervals (e.g. design, construction, testing)

### 8.3 System Development Methodology (SDM) Practices (II.3)

- Describe your established SDM practices. Are these practices utilized by your organization documented in Standard Operating Procedures, Practice Manuals, and/or project/software management reference guides? Please elaborate.
- Can the organization demonstrate that they have “working hands-on” experience with this SDM? Do all projects use this SDM? Did the projects provided as references in Section 3.6 use this SDM?

#### 8.3.1 Design Phase (II.3.1)

If applicable, describe your methodology and tools for assessing a gap analysis and producing general and detailed design specification documents from validated and approved requirements. Describe factors assessed in development of test strategies and plans.

If applicable, describe your customization and configuration of customer software process and procedures. Do you use templates or checklists during your configuration process? How do you verify or validate the requested changes are completed? Are the customization and configuration of customer software procedures documented by vendor?

Question	Response
8.3.1-1 If applicable, describe <u>your</u> methodology for migrating legacy data into a new environment and testing the accuracy of the migrated data.	
8.3.1-2 What is your conversion strategy including data mapping between source and target data fields	

### 8.3.2 Construction Phase (II.3.2)

If applicable, describe your methodology and tools for constructing the application in the hosting environment. Describe your familiarity with code and unit testing, test cases, creating back out and recovery plans, and planning for production support and user training. In addition, please respond to the following questions:

Question	Response
8.3.2-1 Do you offer formal user training?	
8.3.2-2 What type of courses do you run and what is their duration and target audience? (e.g. Implementer level, administrator level, user level)	
8.3.2-3 What level of training would you recommend?	
8.3.2-4 Describe any training materials offered?	

### 8.3.3 Testing Phase (II.3.3)

If applicable, describe your methodology for Integration Testing, System Testing, User Acceptance Testing, Performance Testing, and Recovery testing. Describe your experience with this type of testing. Describe any standard tools you use in the course of product testing. Provide a sample of any documents you use to capture test results and the results that should be obtained for the application to be considered to be operating within normal parameters. Can the organization demonstrate that they have “working hands-on” experience with this test methodology? Which of the projects referenced in Section 3.6 used this test methodology? Describe the test error reporting summaries provided to the HITE-CT.

### 8.3.4 Implementation Phase (II.3.4)

If applicable, describe your methodology of establishing the production environment, assessing the need for production parallel testing, executing a pilot deployment, executing the general deployment, and executing back out and recovery plans established in the construction phase.

### 8.3.5 Post Implementation Phase (II.3.5)

Vendor must document lessons learned, publish a project summary, and archive project and, if applicable, system documentation. In addition, please respond to the following questions:

Question	Response
8.3.5-1 Please provide details of how the product is supported.	
8.3.5-2 What levels of support are available, definitions of each level and what are the hours of operation and	

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Question	Response
response times?	
8.3.5-3 Where are the support services located?	
8.3.5-4 Does support include product updates, as well as bug fixes at no extra charge?	
8.3.5-5 What Help Desk services options do you offer? <ul style="list-style-type: none"> <li>• Describe your capabilities</li> <li>• Provisioning services</li> <li>• Describe your support model, recommended support model, and services</li> </ul>	
8.3.5-6 What is the helpdesk escalation procedure?	
8.3.5-7 Please describe what documentation is provided for the system.	
8.3.5-8 Please provide any configuration manuals available for the system.	
8.3.5-9 Documentation will be key. We will need not only whatever training responder offers, but the ability to turn over sufficient documentation to hospitals, ProHealths, eHealthConnecticut REC trainers, etc. to help assist providers and patients to get connected to systems. This level of documentation at least needs to be public. Please respond to your approach to support this requirement	

#### 8.4 Biographical summaries (II.4)

Provide a ½ page maximum biographical summary for each member of the project team.

## 8.5 Team Resumes (II.5)

Attach resumes (3 pages maximum) for each member of the project team. Keep resumes as short as possible with emphasis on work experience, technical proficiencies, and projects during the last five (5) years. Include resource names and proposed project title on each page

Please specifically identify any member of your team that rely on any form of Work Visa for their authority to work in the United States; please specify the type of Visa, the Visa's expiration date and finally, the individual's formal sponsor as recognized by the Immigration and Naturalization Service.

Resumes should clearly indicate the relevant dates of each project and the amount of participation on the project as a fraction of a full-time equivalent. For example, if proposed developer only worked on a project half of this time, this would be reflected as "0.5 FTE" whereas a fulltime participant would be "1 FTE".

## 9 Section III – Financial Proposal

Vendors must show all costs to HITE-CT for their proposed solution. If the vendor has determined a fixed price by estimating time and materials, the vendor will have the opportunity to detail these calculations and assumptions in the Cost Worksheets. They must also agree that any costs not included in this proposal, for software or service or equipment or any other product or resource necessary to implement a vendor's proposal solution, which was "forgotten" or not included with the proposal submission will be the responsibility of the vendor. HITE-CT reserves the right to infer or consider costs, which in the HITE-CT's opinion, have not been included in the vendor's proposal that may contribute to the HITE-CT's total cost of ownership.

It is required that this information be presented in accordance with *Attachment 1* of this RFP:

- The cost information must include details of unit prices by product component being proposed, quantity, and extended prices by product component, subtotals and any applicable discounts. One-time costs such as freight charges and installation charges must be included by product as appropriate.
- Indicate in your proposal that the proposal is valid for at least one (1) year and prices will be effective for at least one (1) year. A responding vendor further agrees that any across the board price decreases announced by the vendor for any products offered under the proposal will be passed on to the HITE-CT.
- Cost Proposals must rely on the worksheets found in *Attachment 1*. The pricing worksheets provide the format for presenting item-by-item pricing for hardware, software, conversion, maintenance, etc. Vendors must offer a Firm Fixed Price for the core system and a fixed hourly rate for all time and materials for related services when appropriate.
- Pricing worksheets must be provided for any proposed system alternative(s). Vendors must include all necessary software, and maintenance to implement fully functional systems in the cost proposal. Submit a separate *Attachment 1* for each cost proposal alternative and specify that more than one alternative is available in the Financial Executive Summary.



- All License fees for application and support licenses must clearly indicate the license type(s) i.e. Lump-sum, Perpetual or Periodic Payment License.
- All Maintenance and Support fees must clearly indicate when such fees are payable including the commencement and timing following any initial maintenance and support provide under the initial purchase.
- Vendor must fully disclose and explain any fees, charges, costs that are dependent upon other factors including but not limited to hardware, software, management, staff, training, etc.

### **9.1 Executive Summary (III.1)**

The Cost Proposal Executive Summary should recapitulate the proposal as broken down in *Attachment 1, Vendor Proposal Cost Worksheets*. Keep the summary to 1 to 2 pages maximum. Use *Attachment 1* to specify additional cost elaboration details. Clearly summarize the cost proposal and any additional costs elements that will interest the State of Connecticut. Please consider the following bullets below if any are applicable:

- Include any assumptions, qualifications, or explanations that will provide additional clarifications for understanding the cost proposal.
- Describe any price protection applicable to product service/maintenance payments during the periods cited in the above system cost worksheets.
- Specify the basis and extent of any applicable product discounts (e.g., government, educational, multiple system installations) that may be available to HITE-CT but are not already reflected in your system cost worksheets. If your cost offerings already reflect any discounts, specify the type and percent of the discount(s) reflected. HITE-CT reserves the right to make additions or reductions in awards as a result of this RFP. Indicate your agreement to maintain the same discount rate as proposed.
- State the supply costs or specialty equipment required. Please provide source, reusability, and unit cost of any supplies needed for use by any proposed product. Please refer to Appendix 3 for the worksheet for any such costs.

### **9.2 RFP Attachment 03 – Vendor Proposal Cost Worksheet (III.2)**

The *RFP Attachment 1, Vendor Proposal Cost Worksheets* will be placed into this section of the financial proposal. The worksheet should be filled out completely per the instructions within the attachment. An incomplete or partially filled in worksheet may disqualify or negatively affect a proposal. There are provisions within the cost worksheets to allow a vendor to explain or qualify any category price. The *RFP Attachment 10 - Evaluation and Selection Criteria* document explains the RFP scoring process. Only qualified vendor, business, and technical proposals will have their cost proposals opened and examined.

### **9.3 Architecture of Proposed Products**

If a vendor can supply more than one unique product type, version or level of their software that meets or exceeds the requirements in this RFP, vendor must clearly state the existence of multiple products, explain the major differences between them and take these additional steps:

- Provide separate Product Version and Architecture statements for each.

- Complete a Functional Requirements Vendor Response Form for each.
- Provide clear and separate statements in any proposal sections or sub-sections where there are differences between product versions.
- Provide separate cost schedules and total cost if different.
- Identify which is the vendor's preferred solution and why.

#### **9.4 Product Version**

Provide product version information which must include, but not be limited to, product name, version number, date version was released for general use and number of installed customer entities.

#### **9.5 Product Architecture**

Vendor must present a detailed architecture design for the proposed product along with a text description and annotated diagram (or diagrams). Descriptions and diagrams must clearly identify Middleware products, interfaces, message formats and component function. Each description/diagram should be accompanied by a narrative indicating where the proposal meets the HITE-CT technical guidelines and where exceptions will occur.

## ATTACHMENT 1 – VENDOR PROPOSAL COST WORKSHEETS WORKSHEET INSTRUCTIONS

The following instructions apply to the creation of these worksheets:

- Period of performance is expected to be two-years
- Submitters must use the following worksheets as a template to follow for supplying cost data.
- All worksheets are considered mandatory parts of the application, are fixed price in nature, and must be complete for the cost proposal to be accepted.
- If submitter wishes to elaborate on a line item, they should use the additional notes section for the line item. If additional information must be attached (e.g. 3rd party software quote), the submitter should specify the attachment in the appropriate line item additional notes section and attach information at the end of the financial proposal.
- It is to the submitter's best interest to elaborate each line item of the cost worksheets.
- To ease readability, dollar amounts should have cents truncated, and use the following format: 1,234,567.
- Do not renumber the line #s in any worksheet.
- Do not add new line #s to any worksheet.
- Do not leave any entry in the worksheets blank or empty. Where appropriate, enter a zero (0) or "N/A".
- Double check all column amounts and tallies. For example, values from line numbers 100-198 should sum up to the total value in line 199.

Please indicate project objectives and Services for which you are submitting a bid:

Y/N	Service	Prime/Partner offering service	Underlying technology Vendor
	Patient Identity Resolution – PIX Manager		
	Document Registry		
	Document Repository		
	Audit Record Repository		
	Cross-Community Gateway (Initiating, Responding)		
	Healthcare Provider Directory		
	Identity Management (CA)		
	Transformation Services		
	Web Portal		
	eRx gateway		
	Other (Describe)		

Provide any of the options that you provide so that we can explore approaches for start-up and growth. Operational aspects of the HIE including:

- Full service operations

# State of Connecticut – Health Information Technology Exchange

## Request for Proposals

### HITE-CT System Services

- Hosting only – service staff by HITE-CT
- Owned and self-hosted by HITE-CT

Please be sure that the cost proposal includes the following detail:

Question	Response
A3-1 What are the licensing costs for individual parts of the solution?	
A3-2 Are new releases chargeable separately?	
A3-3 What are your consultancy rates to help with implementation?	
A3-4 What do you charge for customization?	
A3-5 What do you charge for training?	
A3-6 What are the maintenance and support costs? Please give a breakdown	
A3-7 Do you offer discounts for volume purchases?	
A3-8 Do you levy any charges for software or services during the evaluation period?	
A3-9 What functionality is available natively, and what requires customization, and what requires building?	
A3-10 All hardware and third party licensing costs shall be included in proposal	
A3-11 Indicate any variation or discounts offered based on number of directly connected clients, XCA clients, number of patients in the pilot/deployment, number of provider identities in the pilot/deployment, number of patient records or volume of records	
A3-12 Describe provisions and support for any data hosted to be exported in standards-based format upon contract termination. Associated costs shall be included in the financial proposal cost worksheets.	
A3-13 Vendor is expected to provide their approach and associated costs to DR plan maintenance.	
A3-14 Provide pricing and scale-up model that will allow us to grow from early deployment to a full state-wide HIE	
A3-15 Describe any options and associated pricing for interfacing with public health, particularly for the communications of immunizations and surveillance data	

**COST**

Please detail all costs for the project, listing each component and optional feature separately. Use the following high-level sheets to provide a consistent summary, clearly identifying any underlying detailed costs.

**WORKSHEET 1 – (Start-up Costs)**

Line #	RFP Cost Proposal Category	Exact Cost	Additional Notes
100	Hardware (if applicable)		
101	Hosting (if applicable)		
102	Vendor Software (if applicable)		
103	3 <sup>rd</sup> Party Software (if applicable)		
104	Implementation Costs (if applicable)		
105	Training		
106	Travel		
107	Configuration		
108	Other		
<b>199</b>	<b>TOTAL</b>		

**WORKSHEET 2 – (Recurring (per month or per year) indicating price-breaks for multi-year contracts (2-year, 5-year, etc) : Identify break-out (e.g. if by service client, if by number of patients, if by volume of documents))**

Line #	RFP Cost Proposal Category	Exact Cost	Additional Notes
200	Hardware (if applicable)		
201	Hosting		
202	Vendor Software (if applicable)		
203	3 <sup>rd</sup> Party Software (if applicable)		
204	Training (updates, process changes)		
205	Other (explain)		
<b>299</b>	<b>TOTAL</b>		

**WORKSHEET 3 – (Adding Service Client node/Data Sources: hospital, group practice, individual practice, Local HIE, Value added interfaces – e.g. public health)**

Line #	RFP Cost Proposal Category	Exact Cost	Additional Notes
300	Hardware (if applicable)		
301	Hosting		
302	Vendor Software		
303	3 <sup>rd</sup> Party Software		
304	Implementation Costs		
305	Training		
306	Travel		

State of Connecticut – Health Information Technology Exchange

Request for Proposals

HITE-CT System Services

Line #	RFP Cost Proposal Category	Exact Cost	Additional Notes
307	Configuration		
308	Other		
<b>399</b>	<b>TOTAL</b>		

### WORKSHEET 3 – (Ad-Hoc/One-time Options)

Line #	RFP Cost Proposal Category	Exact Cost	Additional Notes
400	Hardware (if applicable)		
401	Hosting (if applicable)		
402	Vendor Software		
403	3 <sup>rd</sup> Party Software		
404	Implementation Costs		
405	Training		
406	Travel		
407	Configuration		
408	Other		
<b>499</b>	<b>TOTAL</b>		

### WORKSHEET 5 – MISCELLANEOUS COSTS

Line #	RFP Cost Proposal Category	Exact Cost	Additional Notes
500	Other Expenses (Please explain in detail)		
<b>599</b>	<b>TOTAL</b>		

### WORKSHEET 6 – TOTAL COSTS

Please use the totals from Worksheets 1 through n to complete this Worksheet.

Line #	Total Cost
199	WORKSHEET 1
299	WORKSHEET 2
399	WORKSHEET 3
499	WORKSHEET 4
599	WORKSHEET 5
<b>999</b>	<b>GRAND TOTAL</b>

## **ATTACHMENT 2 - VENDOR PROPOSAL VALIDATION AND AUTHENTICATION STATEMENT**

Vendor Organization: \_\_\_\_\_

FEIN # \_\_\_\_\_ (the “Company”).

The person responsible for the validation of the Company’s proposal must fully complete and sign this statement where indicated and attach it to your company's response to the RFP. By doing so, the signer attests that the given proposal represents:

1. Full and unconditional acceptance of all stipulated administrative requirements of this RFP, # HITE-CT2001,
2. Complete and valid information as of the proposal due date,
3. Product and term offerings that are valid until such date as HITE-CT is specifically notified otherwise, but not less than one (1) year from the proposal due date; and prices that are valid for at least twelve (12) months from the proposal due date,
4. The Company shall comply with all HITE-CT requirements regarding proposal contents and formats, and

Validating Official: \_\_\_\_\_

Signature

Printed Name and Title

By signing this proposal, I confirm that this proposal constitutes a complete, authentic and bona-fide offer to the HITE-CT, which the Company is fully prepared to implement as described. The Company official who validated this proposal was authorized to represent the Company in that capacity on the date of his/her signature.

Authenticating Official: \_\_\_\_\_

Signature

Printed Name and Title

**Any modifications to this form will subject the Company’s proposal to the risk of being deemed a "contingent" proposal, thus subject to rejection by HITE-CT.**

## Attachment 3 – Business and Technical Requirements

### Table of Contents

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## 1.0 Introduction

### 1.1 OVERVIEW OF HITE-CT

HITE-CT is established pursuant to subsection (a) of section 19a-750 of the Connecticut General Statutes to carry out the purposes of the authority, as described in subsection (b) of this section. The purposes of the authority include, but are not limited to, “promoting, planning and designing, developing, assisting, acquiring, constructing, maintaining and equipping, reconstructing and improving of health care information technology.” The HIE will connect physicians and other healthcare professionals in Connecticut. While initial HITE-CT efforts will be focused on supporting Meaningful Use Stage 1, the longer-term goals of the HIE initiative are to support a broad spectrum of clinical and population health services.

The (HITE-CT) is a regional health information exchange established pursuant to section 19a-750 of the Connecticut General Statutes. It is managed by a board of directors as the governing body. The HITE-CT region’s public health and health care providers number over 20,000. **The State licenses and regulates 16,690 physicians**, 32 acute care and children’s hospitals, 14 community health centers with over 50 satellite sites, 77 local health departments (52 are full-time, and 25 are part-time), 241 nursing homes, 251 outpatient clinics, 424 behavioral health facilities; and 29 urgent care centers. Beyond physicians, the DPH licenses over 60 different practitioner titles. In addition to these direct care providers, Connecticut has hundreds of emergency medical services managed by municipal, public, and private entities. A number of entities have expressed interest in participating in the early deployment and short-term deployment phases of the initiative. Any healthcare provider meeting participation requirements will be provide the opportunity to participate.

Members of the HITE-CT seek to share clinical documents in an XDS Affinity Domain and to be able to use the NHIN Direct specifications for exchanging clinical documents for those Connecticut providers that are unable to connect to the exchange.

#### 1.2.1 Project Objectives and Project Expansion Plans

Through the Connecticut Department of Public Health, HITE-CT is participating in the Office of the National Coordinator for Health Information Technology (ONC) State Health Information (State HIE) Exchange Cooperative Agreement Program, and in conjunction therewith is looking to establish a hosted information exchange service to support HITE-CT area providers, for Meaningful Use Stage 1 exchanges within the state with initial goals including:



- Receipt of structured lab results
- Sharing patient care summaries (CCD/C32 as constrained for Meaningful Use) across unaffiliated organizations
- Support the exchange of immunization data between the State Immunization Registry and Meaningful Use Certified EMRs

These goals may evolve to include support for additional Meaningful Use stage I goals, and additional Meaningful Use and stakeholder requirements, including, but not limited to:

- providing patients with an electronic copy of their health information
- Reporting clinical quality measures to CMS or states
- Supporting Medication reconciliation between care settings
- Submitting of electronic syndromic surveillance data to public health agencies
- recording advanced directives for patients 65 years or older
- submitting of electronic data on reportable laboratory results to public health agencies
- Sending reminders to patients (per patient preference) for preventative and follow-up care
- Providing patients with timely electronic access to their health information (including laboratory results, problem list, medication list, medication allergies)
- Providing visit summaries

In order to support this project and future growth, HITE-CT plans to establish an XDS Document Sharing Infrastructure for the Health Information Exchange within Connecticut, along with NHIN Direct support for those providers unable to connect to the exchange or otherwise seeking a point-to-point exchange. This state-wide information exchange will connect to XDS-based document sharing capabilities already in place in multiple communities using the Cross-Community Access (XCA) as appropriate. HITE-CT intends to establish this infrastructure through a hosted service-based environment. We expect this to be a phased implementation initially including one or more hospitals, provider organizations, group practices, small provider systems, integrated delivery system, and community health system. Scope of the pilot will include a mix of large and small practices, hospitals, and local HIEs that will exemplify the types of entities in the state. The HIE is expected to grow over a number of years.

The XDS Affinity Domain Infrastructure Implementation will establish a hosted XDS Registry, Repository, Patient ID Cross-Referencing (PIX) Manager/Patient Demographic Supplier (PDS), Healthcare Provider Directory (HPD) supporting digital identities, and edge system interfaces to existing HITE-CT provider systems for publication and retrieval of medical summaries, immunizations, and laboratory results, with the capability to expand to other clinical content in support of near-term and long-term HITE-CT development.

### **1.2.2 Specific Objectives of the Project**

We are seeking an established service provider to provide hosted information exchange service to support meaningful use exchanges, with the capacity to meet meaningful use criteria as these evolve:

1. Establish *XDS Document Sharing* capabilities for each of the initial Affinity Domain participants and capabilities for enabling new HITE-CT members to establish Document Source capabilities.

2. Establish *XDS Document Source* capabilities for the HITE-CT as a transformer service supporting HL7v2.x or other information sources for to support content sharing for systems not yet supporting meaningful use-specified clinical summaries.
3. Establish a *PIX service* for the HITE-CT. This will include Cross Community Access (XCA) integration with current PIX environments for HIEs identified in the project objectives section of this document. This MAY include and Cross-Community Patient Discovery (XCPD) integration with current PIX environments for these HIEs, and vendor roadmap plans for XCPD support is requested as part of this solicitation. Establish a *Document Registry* for the HITE-CT. This will include Cross Community Access XCA integration with current Document Registries for HIEs identified in the project objectives section of this document
4. Establish an XDS Document Repository
  - a. As a Hosted option for member organizations that are unable or otherwise choose to leverage a hosted resource for document management
  - b. Federated option for those members that choose to manage their own shared documents.
5. Establish *XDS Document Consumer* capabilities
  - a. As an option, a portal accessible to each HITE-CT participant and capabilities for enabling new HITE-CT members to establish Document Consumer interface.
6. Integration with member EHR document source systems as identified in the project objectives section of this document
7. Establish a *third-party, managed hosted service environment* for service offerings, subject to IT Infrastructure Library (ITIL) best practices, Quality of Service (QOS), and security requirements as established by the HITE-CT Affinity Domain Policy.
8. Establish Healthcare Provider Directory (HPD) conformant directory supporting NHIN Direct capabilities to enable simplified interoperability between two known endpoints
9. Establish Identity Management as a service for providers supporting NHIN Direct capabilities, whereby the choice of Certificate Authority is that of the provider:
  - a. subject to identity management policies of HITE-CT
  - b. These services should meet relevant state and federal privacy and security requirements and be appropriate to the exchange approach selected.
  - c. They should include the ability to ensure the provider receiving the record is authorized and is who they claim to be
  - d. They should be federal-bridge certified
10. Authentication services
  - a. The portal access should provide assurance that the authenticated user is authorized to request and retrieve the exchange content subject to HITE-CT consent and access control policy
  - b. Prospective vendors should provide details regarding authentication and access control services, capabilities, and roadmap plans

**The project involves the following key steps:**

1. See section 3.1.1 Procurement Schedule for specific dates and procurement process
2. On the basis of the replies to the RFP document, a short list of potential Vendors will be selected by May 27, 2011, and this group will be asked to present demonstrations of the product(s) which they propose via web-based conferencing Demonstrating the exchange

of clinical documents between one or more CT stakeholder EMR products and the infrastructure service provider. These demonstrations should show ‘out-of-the-box’ integration with the EMR products or otherwise indicate the degree of configuration required to accomplish the demonstration. These demonstrations will use test patients and will not include actual protected health information. These demonstrations are requested to be performed using real systems and/or vendors identified in the project objectives section of this document, and will constitute an initial phase of the HITE-CT pilot efforts. These meetings will be completed by the week of June 10, 2011

3. Selection of vendor by June 24, 2011.
4. Construction of the operational infrastructure and processes for project Infrastructure by the selected vendor, and the implementation of the selected service and associated software components shall be completed by the selected vendor and ready for testing by July 18, 2011. The implemented system shall conform to all applicable state and federal laws and regulations related to the delivery of services as provided herein. The operational components implemented shall include:
  - a. PIX Manager
  - b. Document Registry
  - c. Document Repository
  - d. HITE-CT Transformer
    - i. PIX Feed Interface
    - ii. Provide-and-register documents interface
  - e. Vendor-supplied document consumer interface/portal
  - f. Managed hosted service environment
  - g. This operational infrastructure shall include separate test and production
  - h. Vendor should describe the support model, recommended support model, and supporting services offered
  - i. Establishment of the HITE-CT Document XDS function. The selected vendor will complete this by July 18, 2011
  - j. Establish the CT Healthcare Provider Directory function by July 18, 2011.
  - k. Issue pilot digital identities by July 18, 2011.
5. Pilot Testing of the selected vendor processes and new service and associated software components by August 5, 2011. The selected vendor will perform this. Testing will include interoperability testing between HITE-CT pilot site Document Sources, Document Consumers, Patient ID sources, Patient Identity Consumers, and XCA gateways identified in the project objectives section of this document.
6. Demonstration of production-ready integrated solution for HITE-CT members and community stakeholders by August 15, 2011.
7. Implementation of the pilot of the new system, supporting software and associated processes by July 18, 2011, including all HITE-CT pilot sites identified in this document.

## **2 Functional Requirements**

### **2.1 Business requirement for Meaningful Use**

With Stage I Meaningful Use requirements as the primary information exchange goal, this project seeks to enable exchange of electronic health information for any willing provider. This includes sharing of patient care summaries (CCD/C32 as constrained for Meaningful Use) across

unaffiliated organizations, exchange and sharing of structured laboratory results and immunizations. While ePrescribing is also among the meaningful use goals of the state, this is not functionality that is anticipated to be serviced directly by the health information exchange.

This supports the business goals to:

- Improve the quality, safety, and efficiency of care while reducing disparities
- Engage patients and families in their care
- Promote public and population health
- Improve care coordination
- Promote the privacy and security of Electronic Health Records

Connecticut healthcare providers have been engaged in health information exchange planning deployment initiatives through multiple statewide and regional venues for several years. These initiatives include ONC's Health Information Security and Privacy Collaborative (HISPC), eHealthConnecticut, and multiple hospital-initiated health information exchanges including exchanges in Middlesex, Hartford, Danbury, and Bridgeport. Each of these initiatives has specified the IHE XDS framework with the healthcare provider directory and provider identity management as integral components to the information exchange. IHE XDS deployments are in place, and the HIE services supporting Connecticut will need to be interoperable with these implementations as described in the functional requirements section of this document. Policy requirements defined through the Connecticut participation in the HISPC Adoption of Standard Policy and further specifications from the HITE-CT Legal and Policy committee are also expected to be supported through the functional requirements and standards specified in Addendum 6. Support for Meaningful Use Stage 1 vocabulary requirements and any further HITE-CT standards for vocabularies are expected to be serviced by HIE transformation services. These transformation services are also expected to be leveraged to support acceleration of HIE participation for those providers with limited capabilities to create the standard information exchange content.

The healthcare provider directory and provider identity management is expected to service direct provider to provider communication consistent with the "Direct Project". This will support encryption, authentication, and addressing details needed to conduct provider to provider communications.

## **2.2 Clinical Requirements**

The exchange of clinical information is primarily expected to support continuity of care, particularly in the course of consultations and transfers of care. The patient care summaries (CCD/C32 as constrained for Meaningful Use) will be used to enable ready access to medications, allergies, problem lists and laboratory results to better inform the practitioner in the coordination and delivery of care. These summaries will also serve to engage and inform the patients in their care process. The interoperable communication of immunization data will serve to improve immunization rates support public health immunization monitoring and management programs.

## 2.3 Business Actors

The following business actors are identified within the Health Information Exchange:

**Table 1: Business Actors**

Business Actors	Comments
HITE-CT contracted service provider	Shared Service Provider for Patient ID Cross-Referencing Manager/Patient Demographic Supplier, Policy Repository, Consent Repository, Audit Repository, Registry, Cross-Community Access, Directory Services, Provider Identity Management Services
HITE-CT contracted service provider Shared Document Repository	Repository servicing the HITE-CT providers that choose to host their shared documents
Document Repository	HITE-CT service area Healthcare Providers choosing to manage their shared documents locally
Healthcare Providers Retrieving Records (Document Consumer)	Connecticut Providers (ambulatory and Hospital) Public Health
Healthcare Providers Publishing Records (Document Source)	Connecticut Providers (ambulatory and Hospital)

*NOTE: There are no Personal Health Records, Employers, Quality, or Insurance organizations identified at this time*

## 3 Non-functional Requirements

### 3.1 General Requirements

The vendor will furnish all supervision, labor, materials, equipment, tools, supplies, incidentals, and services needed for proper installation (hereafter referred to as “the work”). The vendor shall pay all fees and secure all permits necessary to complete the work to HITE-CT’s satisfaction and in advance to all required local, state, federal, manufacturers, and technical codes and requirements.

The vendor will utilize only those employees and subcontractors that have appropriate manufacturers’ certification, and completed appropriate training to enable them to perform and complete the work.

The vendor takes responsibility for providing all hardware, software, and personnel necessary to install the proposed system properly. The vendor also ensures continued maintenance and

support for the communications system during the time it is under contractual agreement to provide such services.

## **3.2 Hosting Requirements**

### **3.2.1 Overview**

As this project entails management of personal health information for the purposes of clinical care across multiple provider organizations, the system requirements are expected to conform to industry best practices and standards to assure high availability and business continuity. The hosting environment must address the following Operational requirements:

- HIPAA training
- Problem management, troubleshooting, and escalation processes
- Compliance/certification requirements
- Disaster Recovery plans, plan maintenance, and approaches
- Business continuity approaches/redundancies, etc.
- Performance reporting
- Security/privacy requirements
- Adequate construction and site layout
- Mechanical and electrical system redundancy
- Fire detection and suppression
- Physical and system security
- Authorization management and access management to facilities for personnel and equipment
- Available space and growth plans
- Telco Access
- No Single Point of Failure
- Redundancy of dataset
- Adherence to industry best practices (e.g. ITIL)
- Service Level Agreements
- Ease of operational interaction
- Separation of Test and Production Environments
- Please describe testing processes and change management for implementations, upgrades and modifications to configuration

Proof of best practices for hosted environments must be supported by operational certifications (SAS-70 level 1, SAS-70 level 2, [SSAE 16](#), EHNAC)

### **3.2.2 Incident Management**

An incident can be defined as a service request, or an event which is not part of the standard operation of a service, and which can cause an interruption or reduction in the quality of service. IT departments can integrate and orchestrate the data center tools involved in the event life cycle so incidents are resolved faster and remediation process adhere to corporate policies.

### **3.2.3 Problem Management**

Problem Management investigates the infrastructure (including incident details) to identify the underlying cause and potential failures. However many of the tasks need to be performed to identify root cause require coordination of people, technology and tasks.

### **3.2.4 Configuration Management**

Configuration Management aims to provide reliable up-to-date information about the IT infrastructure and how Configuration Items (CI's) relate to one another. The problem is that many of the changes that impact the Configuration are complete manually which introduces risk of error, latency and even downtime.

### **3.2.5 Change Management**

Change Management aims to manage the process of change and limit the introduction of errors. Whether initiated by a service request such as a new PC or an incident, change management procedures are usually only partially automated due to the lack of integration between the tools involved.

### **3.2.6 HIE Operations Management**

Vendors may offer different levels of HIE operational management which should be fully described in the proposal response. This includes services offered for operational handling of identity linking/delinking and resolving ambiguity in matches. This may also include support and help desk functions, content management, and processing of new connections.

### **3.2.7 Release Management**

Release management aims to ensure the quality of the production environment by using formal procedures when implementing new version.

### **3.2.8 Disaster Recovery and Business Continuity**

HITE-CT plans to establish Disaster recovery procedures (DR) and plans. The vendor is expected to maintain the DR plan for the infrastructure items under their control, and then respond to and implement DR plans in the event of an invocation.

The DR plans are constantly reviewed and enhanced by HITE-CT, and the scope covers all of the systems involved in providing the procured service.

Vendor must provide regular testing of the DR plan twice per year and report to HITE-CT results of the DR test. The DR plan will be reviewed along with the results with HITE-CT to address any relevant changes to the DR plan.

HITE-CT expects the vendor to review and make recommendations to improve DR plans. Please provide evidence where similar services are provided to other customers and examples where DR plans have been improved.

## 4 Technical Requirements

### 4.1 Overview of system and supporting software requirements

HITE-CT core requirements are for a new system with a staging and demonstration environment that support the following

#### 4.1.1 Standards

The service provider will support the following HITE-CT Technical Committee Recommended Standards and IHE Profiles. Proposals shall include IHE Integration Statements and indicate connectathon testing efforts or plans.

**Table 2: Standards**

Document Name	Description
Cross-Enterprise Document Sharing	<i>Cross-Enterprise Document Sharing</i> : Integrating the Healthcare Enterprise (IHE) Integration Profile, that facilitates the registration, distribution and access of patient electronic health records across health enterprises. Cross-Enterprise Document Sharing (XDS) is focused on providing a standards-based specification for managing the sharing of documents between any healthcare enterprises, ranging from a private physician office to a clinic to an acute care in-patient facility.
These Patient ID Cross-Referencing (PIX)	The Patient ID Cross-Referencing (PIX) transactions deal with identifying and cross-referencing different patient attributes for the same patient within the exchange. [...] The PIX query transaction is intended to provide an ‘identify patient query’ / ‘patient(s) identified’ response message pair for use wherever such needs exist. The Patient Identity Feed transaction is intended to allow sending of patient identification information from one system to another.
Patient Demographics Query PDQ	This Patient Demographics Query (PDQ) is intended to support query by patient demographics. This PDQ transaction is intended to provide a ‘list patients and their demographics’ query / ‘patient(s) and their demographics identified’ response message pair for use wherever such needs exist.
Sharing Laboratory Reports XD*Lab	The context for this specification is to have lab results and interpretations structured as an XML document for interchange to meet requirements for human and machine readability. This context also introduces other properties of documents such as persistence, non-repudiation, and unique identification of documents.
Medical Summaries MS	This supports the process of sending patient encounter clinical summary data (excluding laboratory, radiology) in a document sharing functional flow scenario. Patient encounter data are captured as part of the normal process of care performed by healthcare providers such as hospitals, emergency departments and outpatient clinics.
Consistent Time	The Consistent Time transaction provides a mechanism to ensure that



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CT	all the entity systems communicating within the network have synchronized system clocks
Audit Trail and Node Authentication ATNA	To ensure the authenticity, integrity, and confidentiality of transactions, and the mutual trust between communicating parties, and to define and identify security relevant events and the data to be collected and communicated as determined by policy, regulation, or risk analysis
Cross-Enterprise User Assertion XUA	To ensure that an entity is the person or application that claims the identity provided
Basic Patient Privacy Consents BPPC	Basic Patient Privacy Consents provides a means to capture, manage, and communicate rights granted or withheld by a consumer to one or more identified entities in a defined role to access, collect, use, or disclose protected health information (PHI), and also supports the delegation of the patient's right to consent. This will be configured to support the HITE-CT Legal and Policy requirements.
HITSP C32 / Exchange of Personal Health Record Content XPHR	Summary Documents Using HL7 Continuity of Care Document (CCD) Component describes the document content summarizing a consumer's medical status for the purpose of information exchange. The content may include administrative (e.g., registration, demographics, insurance, etc.) and clinical (problem list, medication list, allergies, test results, etc.) information. This Component defines content in order to promote interoperability between participating systems such as Personal Health Record Systems (PHRs), Electronic Health Record Systems (EHRs), Practice Management Applications and others. This CDA Document shall be further constrained as required for Meaningful Use stage 1.
Immunization Content Profile IC	The Immunization Content Profile defines standard immunization data content for Immunization Information Systems (IISs), other public health systems, electronic medical records (EMR) systems, Health Information Exchanges, and others wishing to exchange immunization data electronically in a standard format.
Cross-Community Access XCA	The Cross-Community Access profile supports the means to query and retrieve patient relevant medical data held by other communities. This will be used to connect with HITE-CT regional health information exchanges
Healthcare Provider Directory HPD	The Healthcare Provider Directory (HPD) profile supports queries against, and management of, healthcare provider information that may be publicly shared in a directory structure.
The Cross-Community Patient Discovery XCPD	The Cross-Community Patient Discovery profile complements the XCA profile by supporting the ability to locate communities which hold a patient's relevant health data and the translation of patient identifiers across communities holding the same patient's data.

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Cross-Enterprise Document Reliable Interchange XDR	Cross-Enterprise Document Reliable Interchange (XDR) provides a standards-based specification for managing the interchange of documents that healthcare enterprises have decided to explicitly exchange using a reliable point-to-point network communication.
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**Future Use Cases will adopt these additional HITSP Specifications**

On-Demand Documents	The use of On-Demand Documents supports registration of the availability of content dynamically assembled in a document; content that is expected to change over time, and in response to a retrieve request returns the most current content available to the bidder. This feature MAY be used in the HITE-CT to support immunizations from public health or other areas of possible HIE growth.
Query for Existing Data (QED)	Query for Existing Data (QED) allows information systems to query data repositories for clinical information on vital signs, problems, medications, immunizations, and diagnostic results. This feature MAY be used in the HITE-CT to support immunizations or laboratory from public health or other areas of possible HIE growth.
Document Metadata Subscription DSUB	Document Metadata Subscription (DSUB) Integration Profile, which describes the use of subscriptions within an XDS Affinity Domain or across communities. This feature MAY be used in HITE-CT to support public health or clinical purposes in HIE growth and enhancements.
Multi-Patient Query MPQ	Multi-Patient Query (MPQ) provides a means to do queries on multiple patients, based on pre-established meta-data. This feature MAY be used in the HITE-CT to support public health or quality purposes in HIE growth and enhancements.
Retrieve Form for Data Capture RFD	In the context of public health, surveillance of reportable conditions typically includes required reporting laboratories and healthcare providers of defined conditions and test results which are defined by state public health authorities to be of interest for the monitoring and management of potential public health threats. These reports include some information available in the clinical or laboratory information systems, but also typically include a number of supplemental information variables specific to the reportable disease that require human input or computation from one or many systems. The Retrieve Form for Data Capture Transaction Package will enable such data capture from within the user's clinical information system which will help to improve the workflow and timeliness of required reporting.
Document Digital Signature DSG	To support Non-repudiation of origin. This feature is intended for future plans.
Cross-enterprise Document Sharing for Imaging (XDS-I)	IHE IT Infrastructure has released the Cross-Enterprise Document Sharing (XDS) profile. It provides an integration solution to the problem of general-purpose document sharing in a broad healthcare environment. This profile [XDS-I] specifies sharing of imaging “documents” such as radiology images and reports; it presents a solution for sharing imaging

	documents based on XDS. XDS-I extends XDS by sharing, locating and accessing DICOM instances from its original local sources, e.g. for radiologists or oncologists. Radiology exchange MAY be used in the HITE-CT to clinical purposes in HIE growth and enhancements.
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### 9.5.1 System Actors

**Table 3: System Actors**

<b>IHE XDS Actors</b>	<b>System Actors</b>
PIX Manager	HITE-CT Infrastructure Service Provider
Patient Demographics Supplier	HITE-CT Infrastructure Service Provider
Audit Repository	HITE-CT Infrastructure Service Provider Local or Regional Healthcare Providers Retrieving Records (Document Consumer, Document Source) are anticipated to use the HITE-CT Infrastructure Service Provider, but may choose to reference another audit repository. Regional HIE providers will leverage their associated Regionally managed Audit Repository.
XDS Registry	HITE-CT Infrastructure Service Provider Regional HIE providers identified in the project objectives section of this document will leverage their associated Regionally managed XDS Registry
XDS Repository	HITE-CT Infrastructure Service Provider Regional HIE providers will leverage their associated Regionally managed XDS Registry Providers may choose to manage their own Local Document Repository
Document Consumer	HITE-CT Service Provider Web Portal providing access to providers without native EHR support, Healthcare Providers Retrieving Records (Document Consumer): Native EMR as available
Document Source	HITE-CT Transformer Service Provider Healthcare Providers providing documents through their Native EMR (Document Source)
Patient Identity Source	Healthcare Providers providing documents through their Native EMR HITE-CT Transformer Service Provider
PIX/PDQ Patient Identity Consumer	Healthcare Providers Retrieving Records (Patient Identity Consumer) through their Native EMR HITE-CT Web Portal
BPPC Consent Document Source	HITE-CT Service Provider Healthcare Providers providing consent documents through their Native EMR

BPPC Enforcement	HITE-CT Service Provider Portal Healthcare Providers Retrieving Records (Document Consumer): Native EMR as available
HPD Provider Directory	HITE-CT Service Provider
Identity Services Provider	HITE-CT Service Provider Digital Identities may be acquired by providers using any Certification Authority conforming to HITE-CT Identity Management Policy

## 4.1.2 Transactions

### 4.1.2.1 XDS Transactions

The Following Transactions shall be supported by the infrastructure service provider:

**Table 4: IHE Transaction**

Transaction	Transaction Name
IHE-ITI TF-2§3.1	Maintain Time
IHE-ITI TF-2 §3.9	PIX Query
IHE-ITI TF-2 §3.8	Patient Identity Feed
IHE-ITI TF-2§3.21	Patient Demographics Query
IHE-ITI TF-2§3.14	Register Document Metadata
IHE-ITI TF-2§3.15	Provide and Register Document Set
IHE-ITI TF-2§3.16	Query Registry
IHE-ITI TF-2§3.17	Retrieve Document Request
IHE-ITI TF-2§3.18	Registry Stored Query
IHE-ITI TF-2§3.19	Authenticate Node
IHE-ITI TF-2§3.20	Record Audit Event
IHE-ITI TF-2§3.41	Provide&Register Document Set-b
IHE-ITI TF-2§3.42	Register Document Set – b
IHE-ITI ITI-43	Retrieve Document Set
IHE-ITI ITI-38	Cross Gateway Query
IHE-ITI ITI-39	Cross Gateway Retrieve
IHE-ITI ITI-51	Multi-Patient Stored Query
IHE-ITI ITI-52	Document Metadata Subscribe
IHE-ITI ITI-53	Document Metadata Notify
IHE-ITI ITI-54	Document Metadata Publish
IHE-ITI ITI-55	Cross Gateway Patient Discovery
IHE-ITI ITI-56	Patient Location Query
IHE-ITI ITI-58	Provider Information Query
IHE-ITI ITI-59	Provider Information Feed
IHE-ITI ITI-61	Register On-Demand Document Entry

**4.1.2.2 Transformer Transactions**

The transformer shall support the provide-and-register function to publish the documents to XDS. Query for Existing Data (QED) may be of interest for interoperability with public health. The following transactions shall be supported inbound by the transformer to support the HL7 interface input from non-conformant provider systems:

**Table 5: Transformer Transactions**

<b>Event Type</b>	<b>Description</b>
A01	Admit an inpatient
A02	Transfer a patient
A03	Discharge a patient
A04	Register an outpatient
A05	Pre-admit a patient
A06	Transfer an outpatient to an inpatient status
A07	Transfer an inpatient to an outpatient status
A08	Update encounter information
A11	Cancel an admission
A13	Cancel a discharge
A18	Merge patient information
A38	Cancel a preadmission
A40	Merge patient identifier
Custom Message	Z-segments that may be constructed by RHIO participants to supplement source information content optimization
VXU	HL7 2.5.1 Specification for Vaccination Messages

**4.1.2.3 Content**

The following content shall be supported by the document source and document consumer. For those content profiles not currently supported, the vendor shall provide a plan and associated timeline for enabling the provider to publish/consume, and where the vendor is providing an EMR, import this content. The vendor will need to provide transformation services to enable content to be provided by provider systems without native support for the standard documents:

**Table 6: Supported XDS Content Profiles**

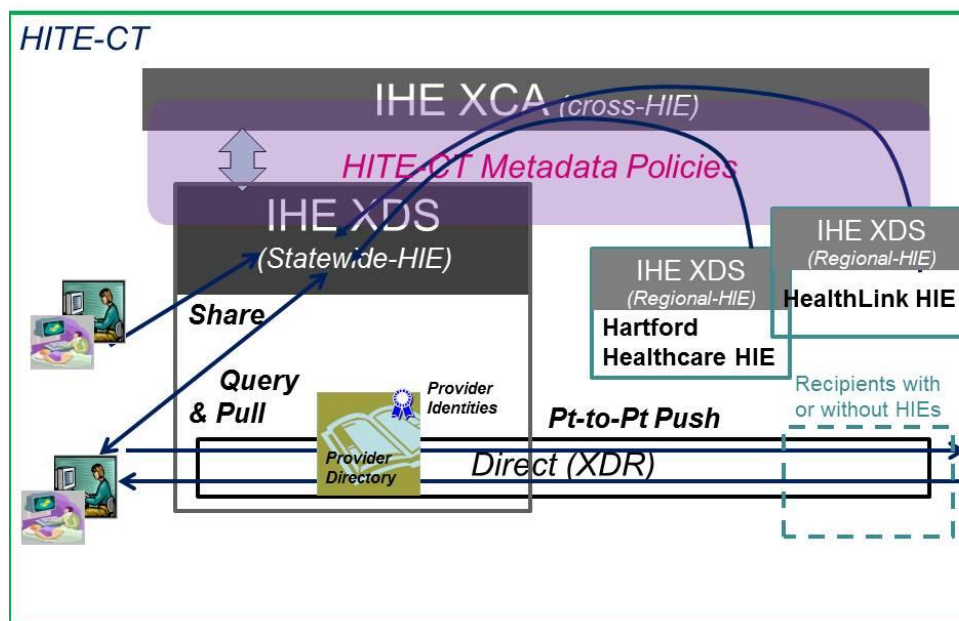
<b>Code</b>	<b>Comment</b>
XD*Lab	Laboratory Reports as constrained by HITSP Laboratory Report Document
BPPC	Basic Patient Privacy Consents
HITSP C32	Summary Documents Using HL7 Continuity of Care Document (CCD) Component as constrained by Meaningful Use Stage 1
XDS-MS	Medical Summary with constraints consistent with Meaningful Use Stage 1 constraints to C32
IC	Immunization Content

**Table 7: Expansion Supported XDS Content Profiles**

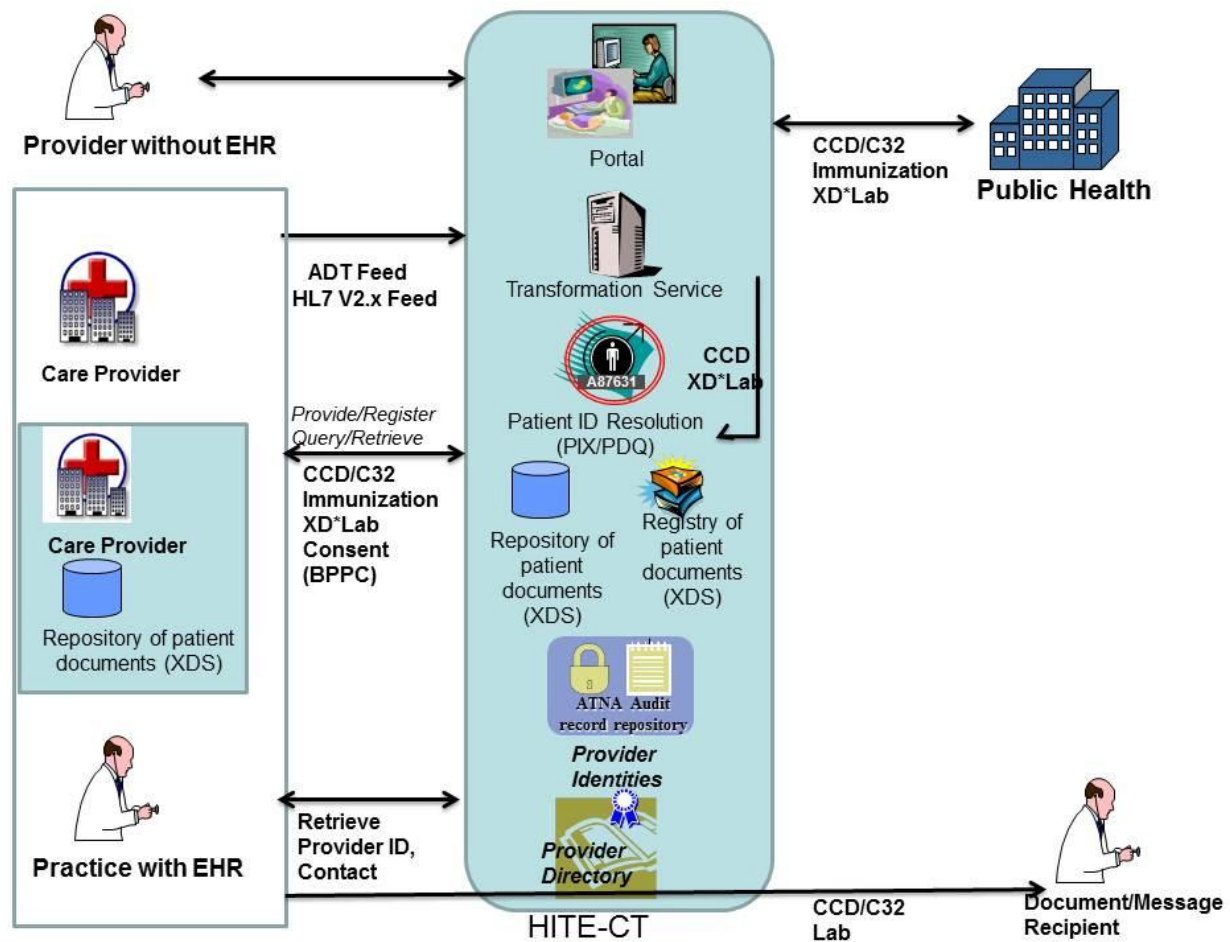
Code	Comment
EDS	ED Summary
APS	Antenatal Care Summary
FSA	Functional Status Assessments
XDS-XPHR	Exchanging PHR Content
XDS-SD	Scanned Document
XDS-I	Cross-enterprise sharing of Images as constrained by HITSP Sharing Radiology Reports
EDR	ED Referrals

#### 4.1.2.3 Integration Requirements

The diagrams in figures 4, 5, and 6 provide an overview of the technical environment in which the selected system and supporting software will be implemented:



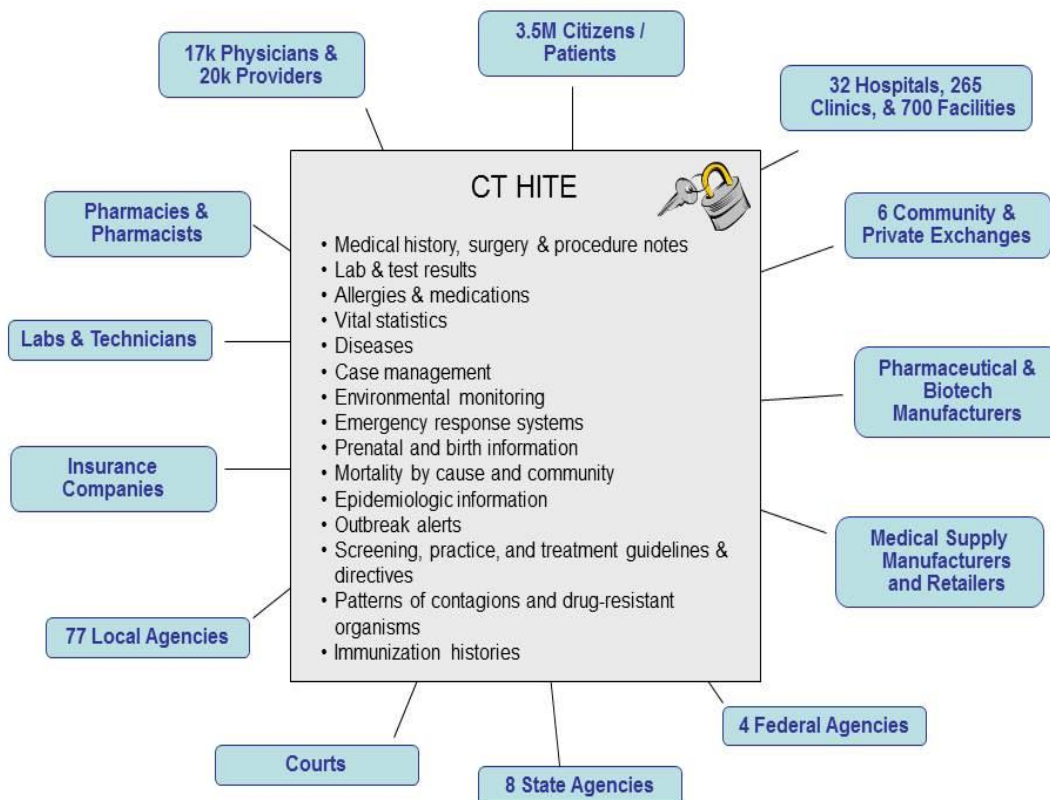
**Figure 2: HIE Interoperability Framework**



**Figure 3: Query and Retrieve Documents**

## 5.0 Current Processes

### Current Health Information Exchange Environment



**Figure 4: HITE-CT Healthcare Stakeholders**

As identified by the HITE-CT Operational Plan, Connecticut's public health and health care providers number over 20,000. **The State licenses and regulates 16,690 physicians**, 32 acute care and children's hospitals, 14 community health centers with over 50 satellite sites, 77 local health departments (52 are full-time, and 25 are part-time), 241 nursing homes, 251 outpatient clinics, 424 behavioral health facilities; and 29 urgent care centers. Beyond physicians, the DPH licenses over 60 different practitioner titles. In addition to these direct care providers, Connecticut has hundreds of emergency medical services managed by municipal, public, and private entities.

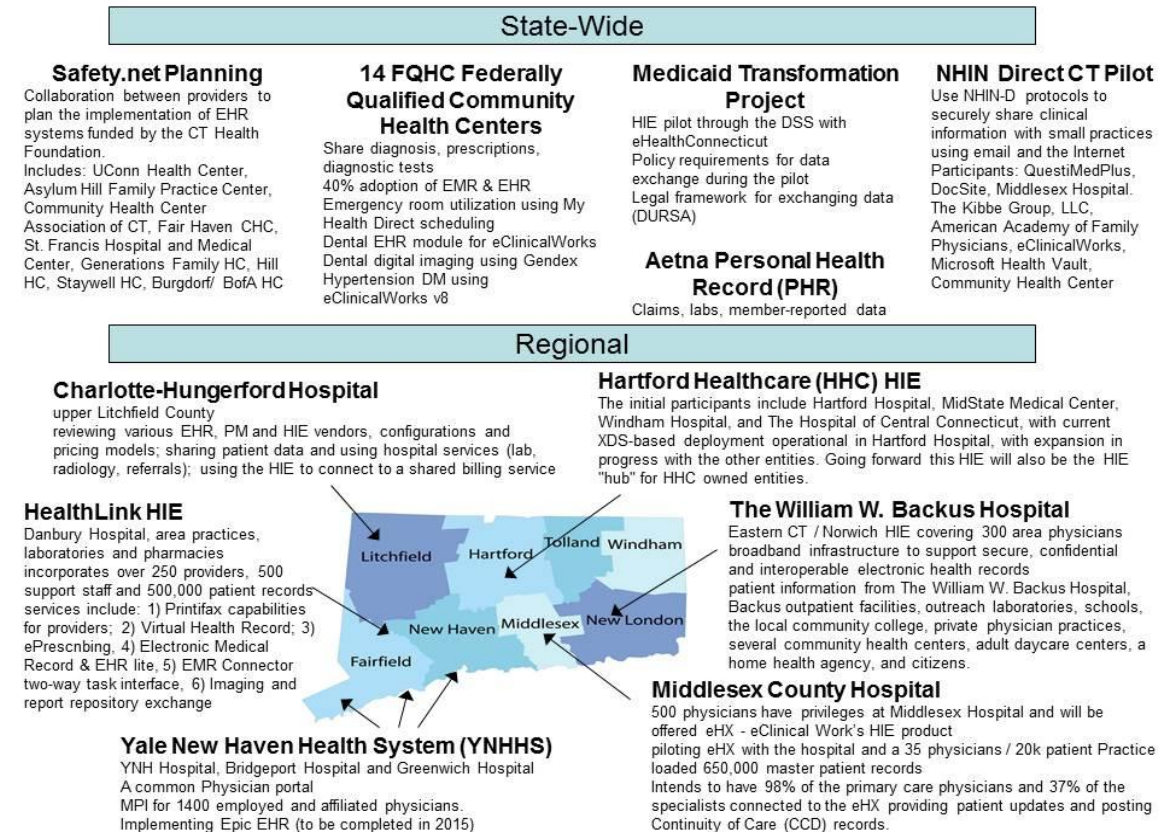
There are currently five statewide collaborative initiatives within the state and six local HIE initiatives already under way in CT which are expected to be part of the HITE-CT with varying timelines:



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**Figure 5: Connecticut Health Information Exchange Initiatives**

The following HIS/EHR vendors support the Connecticut healthcare providers and provide an indication of the interoperability needs beyond the pilot provider systems.

Vendor	Total	ED	Inpatient EMR	Laboratory	Outpatient EMR	Pharmacy	Radiology	Revenue Cycle	Other
Meditech	236	17	74	29	30	13	18	52	3
Cerner	102	11	32	24	7	5	10	11	2
GE/IDX	70	5	18		4	3	11	26	3
Siemens	45		12		1	3	5	20	4
Eclipsis	34	6	11	1			1	15	
Mckesson	29	2	8		1	2		14	2
Misys	26			17	7			2	
GE	10				7		3		
Softmed	8		8						
PICIS	7	6							1
SCC	7			7					
eClinicalWorks	6				6				
Picis/Ibex	6	6							
EmPower	6	6							
Fuji	6						6		
Mediatech & NDCePremis	5							5	

**Figure 6: Source information in current environment**

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Since this survey information was gathered, additional EHRs have been deployed, including, Allscripts, NextGen, Epic, Sage, Greenway, and others. There is also interest among providers in the state to consider lower-cost options including SOAPware and Amazing Charts.